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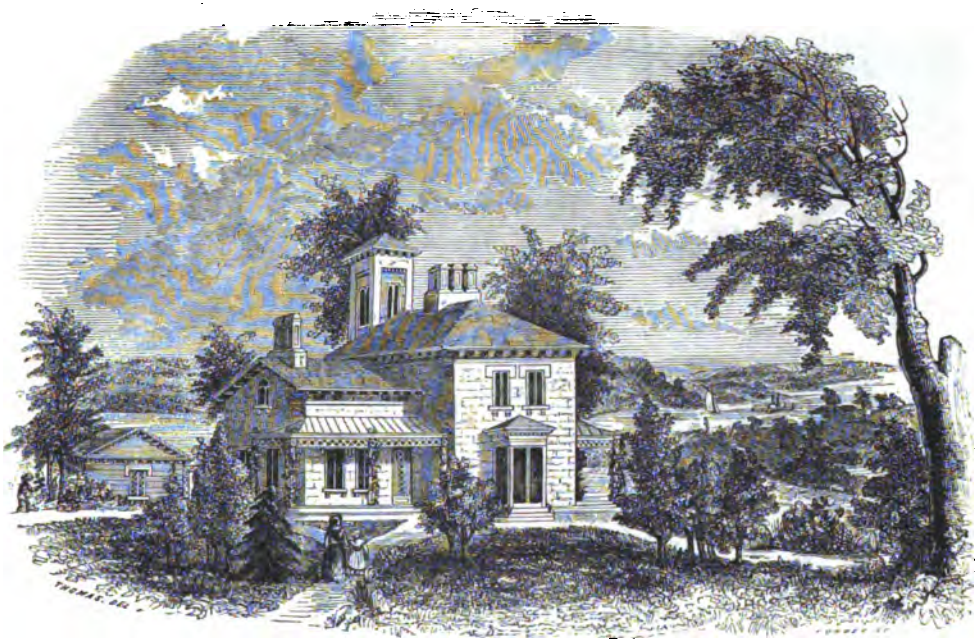

HOPE COTTAGE.

[Cultivator, Jan., 1848.]

THE

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AND TO

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

Vol. V. ALBANY, JANUARY, 1848. No. 1.

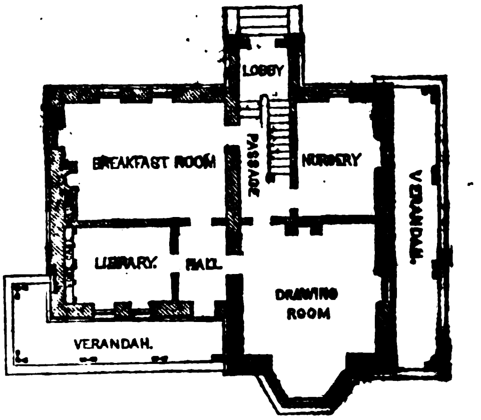
RURAL ARCHITECTURE—HOPE COTTAGE.

"There is nothing," observes A. J. Downing, "that more powerfully affects the tastes and habits of a family—especially the younger members of it—than the house in which it lives. An uncouth, squalid habitation, is little likely to awaken that attachment to home, that love of good order, and that sense of propriety and elegance in social deportment, which are so much promoted, so much developed, by that home where a certain proportion, a certain fitness, and a sense of beauty, are everwhere visible."

With such views as these, every observing person must hail with much satisfaction, the great improvement, within the past few years, in country architecture. A rapid change for the better, in the adoption of styles adapted to rural and picturesque scenery, has taken place throughout the country. Inexpressive square blocks and right-angled parallelograms, are yielding to the more free and tasteful erections in neat Gothic and Italian. The stately and formal Grecian, formerly considered the utmost limit of perfection for a country dwelling, has had its day. It may, indeed, do very well for the compact city, and is admirably fitted for the ambitious capital, or the massive banking house. It may also suit the stiff, geometric style of planting; but this mode of planting has long since given place to the infinitely superior manner of imitating the graceful and picturesque in nature. The Gothic and Italian are divested of formality, and the ease with which the outlines of buildings in these two styles may be broken and varied, render them perfectly adapted to modern landscape gardening, and to maintain that harmony which should exist between buildings and the surrounding grounds.

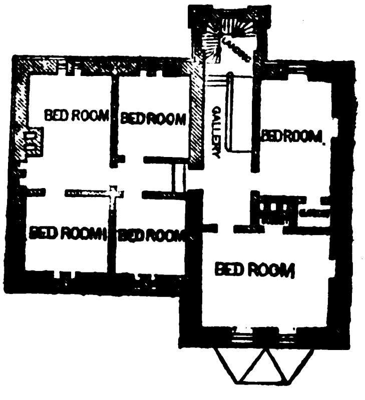
On the ground of strict utility, these modes possess peculiar advantages for rural erections. The convenient juxtaposition of rooms, in Grecian buildings, is often sacrificed to exterior uniformity. But in these, what is regarded as a defect in the Grecian, becomes, in judicious hands, a source of [illegible] beauty, by affording a varied and picturesque outline against the sky.

In so rapid an introduction of these new styles, it was not to be expected that every one should at once fully appreciate their peculiar characteristics. Vague and undefined notions must at first exist when a subject entirely new, engages the attention. Hence we are not surprised to see many examples of bad taste; the plain, [illegible], and chaste, being excluded by a profusion of gingerbread work, and fantastic and unmeaning decoration. A more thorough knowledge of correct principles in architecture of this kind, will gradually dissipate these defects; and appropriate and tasteful ornament be only sparingly introduced, instead of superfluous and flimsy carvings. This change, which has already made great advances, promises a most pleasing improvement in the scenery of our country; when true taste, without increase in cost, shall be exhibited in neat cottages, as well as in farm houses and mansions.

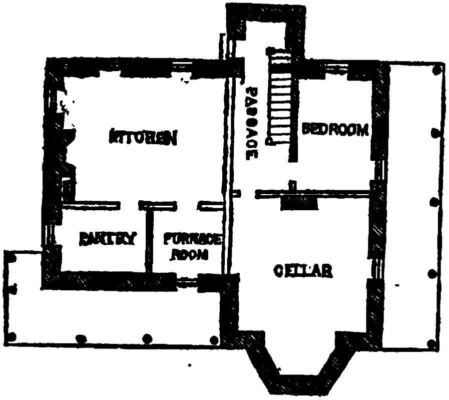


Principal Floor—Fig. 2.

For the purpose of inviting more particular attention to the Italian style of architecture, we have selected for a frontispiece to our present number, a view of "Hope Cottage," one of four, recently erected by E. P. Prentice, Esq., on his estate at Mount Hope, on the west bank of the Hudson, just below this city. Almost exclusive attention has been given hitherto to the Gothic style, by those erecting country residences according to the principles of taste and picturesque



Second Floor—Fig. 3.



Basement—Fig. 4.

beauty. We believe, however, that the merits of the Italian mode of building, are peculiarly adapted to our country; for while it possesses entire freedom from the stiffness of the Grecian, and admits of every variety of outline, it surpasses the Gothic in the simplicity of finish and expression of utility, which is so desirable, and in accordance with our republican character. This cottage was built from a design furnished by Mr. **Geo. Penchard**, an architect of much taste and skill, of this city. Figs. 2, 3, and 4, give plans of the several floors, and require no explanation.

The other three cottages, alluded to above, were erected the past season, from designs by the same architect. One is in the Tuscan, one in the English rural Gothic, and the other in the Swiss style. The latter is a very beautiful specimen of its kind. It is covered on the sides with pointed shingles; balustrades extend around the two prominent sides on a level with the principal floor, and across the front on the second floor, both supported by brackets; while its broad and shadowy eaves give a most interesting expression to the whole.*

Fine-Wooled Sheep in the Valley of the Ohio.

Editors Cultivator—Having seen frequent notices of the flocks of fine-wooled sheep in Western Virginia, Western Pennsylvania, and the eastern portions of Ohio, I thought that an account of the origin of some of those flocks, might be acceptable to the readers of the Cultivator. I deem the history of those flocks of more consequence, as it throws some light on the general subject of improving the fineness and quality of wool. I believe the eastern manufacturers consider the wool of this section equal in quality to any produced in the country.

Most of the fine flocks in this section, were originally derived from the celebrated flock of the late W. R. Dickinson, of the firm of Wells & Dickinson, of Steubenville, Ohio; and as the origin and history of this flock seems not to be generally known, I have taken some pains to ascertain it, and have embodied the main facts relating to it in the following account.

I would state, in the first place, that at the time of the large importations of Saxon sheep, in 1825 and 1826, it was stated by those who were acquainted with Mr. Dickinson's flock, that he had sheep which produced as fine wool as any of the imported Saxons, and at the same time their fleeces were much heavier. In 1826 an opportunity of testing this point was presented. The Maryland Agricultural Society offered a special premium in the following words:—" To the owner of the ram which, being shorn on the ground, [of exhibition,] shall produce the greatest quantity of pick-lock wool." The competition was free for the Union. The exhibition was held near Baltimore, on the 1st and 2d of June of the year above-mentioned. The first premium was awarded to Mr. Dickinson, for a ram which he sent from Steubenville purposely for this trial. Wm. Patterson, of Baltimore, received a second premium for a Saxon ram, whose wool was said by the committee to be " a *shade* finer" than Mr. D.'s, but fell considerably short in quantity.

In a letter dated Steubenville, Ohio, May 22, 1826, published in the *American Farmer*, vol. viii, page 81, Mr. Dickinson states that he purchased the foundation of his flock from James Caldwell, Pennsylvania, who was an extensive breeder of Merinos. He commenced the business at an early day, having in 1806 purchased a ram and two ewes from Col. Humphrey's flock. He expended more than forty thousand dollars in purchasing, to use the language of Mr. Dickinson, " the *cream* of almost every importation from Spain during the invasion of that country by the French." Mr. Caldwell accumulated a large flock, which, after the peace of 1815, was principally sold to Messrs. Howell, of New Jersey, who subsequently transferred it to Mr. Dickinson.

The letter of Mr. D. to the *American Farmer*, above-mentioned, is accompanied by one he had received from Mr. Caldwell, from which, as it furnishes a clear account of the origin of Mr. D.'s flock, and contains, besides, very important and valuable observations in relation to breeding sheep, I have thought proper to make the following extracts. Mr. C.'s letter is dated Philadelphia, April 11, 1826. He says :—

" In the fall of 1806, I purchased one ram and two ewes from Col. Humphrey's Merino flock, for which I paid $300. This ram was accidentally killed a short time after, and in the spring of 1807, Mr. Basse Muller imported into Philadelphia six Merino sheep, which he said had been obtained by him from the flock of the Prince of Hesse Cassel. The sheep were all remarkably fine animals, and at Mr. Muller's request I took them to my farm, and kept them till they had recovered from the effects of the voyage, and were in a condition to travel. I then prevailed on Mr. Muller to let me have one of these rams, and to name his own price. He consented to do this as a personal favor, and did not consider it *a sale* when he named $100 as about sufficient to defray the additional cost and charges. The sum was paid by me with great satisfaction, although at that time I would rather have had a ram of equal quality *directly* from Spain; thinking it best to procure the water from the *fountain head*, as less liable to impurities than farther down the stream. A sheep seven-eighths Merino *may have* all the external qualifications of a full-blood Merino; but no experienced breeder would think it equally safe or desirable to breed from such an animal, when the genuine full-blood can be obtained. I would prefer one of the best horses of Arabia for *speed and bottom*, to the most beautiful English racer, if I desired to propagate and *perpetuate* those qualities. And *even now*, I would rather cross with the best Spanish ram, than with the best Saxon

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* One of the finest specimens of Gothic in the State, is the large and substantial mansion of Robert B. Howland of Union Springs, Cayuga co., now nearly completed. It is built of stone, and every part of the most durable materials, all the roofs being of galvanized iron. It commands a view of Cayuga lake, at one of its most beautiful points of scenery.

Merino, unless I *knew* that the Merino had been kept pure and *unmixed* in Saxony. *The contrary* practice would be gradually but certainly breeding back again into the common stock of the country. I have, however, every reason to believe, that the sheep imported by Mr. Muller were perfectly pure Merinos; and I think Columbus [a noted ram] was the first descendant from Muller's ram, and one of Col. Humphrey's ewes. You are certainly wrong in thinking Columbus was the best ram in my flock. It was Americus that sheared 12¼ lbs. of wool which I sold for $25 cash. It was Americus that weighed 148 lbs. Americus was begotten by Columbus, and was, in my opinion, in all respects a superior sheep. I now think that Americus was the best Merino ram I have ever met with, although I have travelled from Boston to Alexandria for the purpose of examining all the early importations from Spain, and of purchasing the best I could find.

"I have expended more than $40,000 upon Merino sheep, but never could find one equal to Americus in every respect. I do not remember the weight of Columbus; but his fleece never weighed more than 9¼ lbs., which I sold for $2 per lb. Mr. Howell gave me $300 for Columbus, at a time when the best imported Spanish rams were to be had for $50. The same Mr. Howell gave me *five hundred dollars* for Americus. I presume you have mistaken these two sheep."

There cannot be a doubt that Mr. Dickinson rendered the section where he was located, very important service by the introduction and dissemination of his valuable stock of sheep. It will be seen by Mr. Caldwell's letter, that these sheep had not only *fine* wool, but that they produced very heavy fleeces—the ram Columbus having sheared 9¼ lbs. at a clip, and Americus 12¼ lbs.; and the wool of both was of such excellent quality that it readily commanded $2 per lb., cash. The fleeces were unquestionably washed, or they would not have brought such a price. It is true that this was at an early day, when fine-wool was comparatively scarce, but the price is, nevertheless, an indication of superior quality.

In the *American Farmer*, vol. vii, page 331, there is a communication under date of Dec. 23, 1825, from John McDowell, Steubenville, Ohio, in reference to some samples of wool which he had sent to Mr. Skinner, then the editor of that publication. The samples were taken from Mr. McD.'s flock, which he states was derived from Mr. Dickinson, and the quality of the wool was stated to be such that Mr. McD. obtained "*eighty cents per pound for the lot* [about 400 fleeces] *in the dirt.*" Mr. McD. observes that "the country is more indebted to Mr. Dickinson than to any other man in it, for the present standing of the Merino sheep; for when they were at the lowest ebb, perfectly degraded, and suffered to be adulterated, and destroyed in every manner, he meted to them the strictest attention, and retained them entirely pure, and for many years supplied all the flocks of the west with full-bred bucks." In relation to the samples of wool and Mr. Dickinson's flock, the editor of the publication referred to remarks, that he believes Mr. D. could "select from his flock individual rams and ewes in as great number, and with fleeces as fine, as can be found in any flock of like number in any country."

John H. Ewing, Washington, Pa., speaking of the introduction of Merino sheep into that section, says:—"But of those most distinguished for their efforts, Messrs. Wells & Dickinson, of Steubenville, are entitled to the greatest credit. They made great progress in wool-improvement, and spent a fortune to establish their purpose, and in establishing its manufacture." [*Amer. Shepherd*, page 414.

The chief point to which I wish to call attention, in relation to this subject, is, that Mr. Dickinson obtained the remarkable fineness of wool for which his sheep became noted, principally by his own good management. With the exception of the ram from Hesse Cassel, above-mentioned, his flock appears to have originated from Spanish sheep of various importations. He observed great care in his selections, and in that way, and by bestowing proper treatment on his sheep at all times, he continually improved the general quality of their wool; and in this he gave an example which other wool-growers might profitably imitate.

In a future article, I will endeavor to give some notice of the most celebrated flocks in this section. R. W. *Wellsburg, Va., Nov.* 23, 1847.

Domestic Economy, Recipes, &c.

PRESERVING GRAPES IN WINTER.—W. Williams, near New-York city, describes, in the Horticulturist, two modes of preserving Isabella and Catawba grapes: the first for early winter use; the second for late winter and spring—he has kept them quite sound till April.

The first mode consists simply of depositing the grapes in single layers on shelves with light wooden latice bottoms, arranged within his ice-house.

The second is packing them in boxes, which are of rather small size, (about 1 peck each,) such as may be opened once a week, as wanted for use. As these are for longer keeping, the grapes are gathered, before fully ripe, on a dry windy day, and packed away perfectly dry. They are lined first with paper, and then with cotton, and cotton is placed between every layer of grapes till the box is full. They are then covered with cotton, and the cover fastened down with nails or otherwise. It is found that decay takes place slower when the air is not entirely excluded.

CURING BEEF.—By most of the modes now in use, the beef becomes too much impregnated with salt, and is not as a consequence so fine for eating. By the following process this difficulty is prevented, and the beef will keep till the following summer: To 8 gallons of water, add 2 lbs. of brown sugar, 1 quart of molasses, 4 oz. of nitre, and fine salt till it will float an egg. This is enough for 2 common quarters of beef. It has been repeatedly tried and found very fine; a famous beef eater says it is the only good way.

TO EXTINGUISH CHIMNEYS ON FIRE.—"First shut the doors and windows of the room containing the fire; stop up the flue of the chimney with a piece of wet carpet or blanket; and then throw a little water or common salt on the fire. By this means the draught of the chimney will be checked, and the burning soot will soon be extinguished for want of air. Let this be remembered by the reader."

FATTENING POULTRY.—An excellent way is to boil potatoes, and mash them fine, then add meal, just before the food is given to them. It is asserted that turkeys, geese, and other fowls, will thus fatten in one half the time usually required when they are fed on grain alone.

AGE OF POULTRY.—Those who purchase poultry will observe, that if a hen's spur is *hard*, and the scales on the legs *rough*, she is old. If the head is on, the comb will be thick and rough, and the under bill stiff, and hard to bend down. A young hen has only rudiments of spurs, scales on the legs smooth, and fresh, claws tender and short, under bill short, comb thin and smooth. The same remarks, as to the legs, apply in part to turkeys and to geese.

WATER PROOF GLUE.—Render glue perfectly soft, but not liquid, in cold water; then dissolve it by gentle heat, in linseed oil. It dries almost immediately, and water will not affect it.

MAKING, SAVING AND APPLICATION OF MANURE.

Messrs. Editors—I have something further to offer, in continuation of my remarks published in the November number of the Cultivator, upon the subject of "making and saving manure." They may appear somewhat *racy*, but yet, I fancy, they will be found to have a practical bearing upon this important matter.

In the November number, I remarked that my breaking up of sward land is done in November. I will be more particular in stating my reasons:—Besides other reasons that might be named, the frosts of winter so pulverise the surface of the inverted furrows, that I can the more easily bury the dressing of compost that is applied in the spring to a suitable depth without disturbing the sod. The harrow is put on first, after spreading the manure, which distributes it more equally over *all* the land, and finally divides the loose earth above the sod, so that when the plow is put in, the roller on the beam being ganged to the right depth, the manure can be buried three to four inches, which is, in my opinion, about the right depth for compost.

By this mode of practice, my corn crops are always heavy. Five years since I broke up a field of ten acres in November, nine inches deep, and in the spring applied forty-two-horse loads per acre, of a compost of two loads of muck to one of stable manure, and planted it to corn. This field averaged eighty-five two bushel baskets of ears to the acre. The crop of oats following was very heavy, as have also been those of grass. I have mowed this field three years, and one raking on a side with a hand rake, makes as large a winrow as can be managed. The year previous a field of five acres, managed in the same way, averaged over ninety bushels of corn per acre.

In speaking of the hog-pen, I might have added, that where practicable, it should be located so as to receive the manure from the horse stable. My hog-pen is situated under the horse stable windows, and the manure of two horses is thrown into it. Horse manure, if left in heaps by itself, becomes almost worthless by overheating; but if thrown into a hog yard there is no danger of over fermentation, for the hogs keep it continually moving, and they also mix it up thoroughly with the other materials in the yard.

Among other materials that may profitably be gathered for manure, I mentioned in my November article, that the accumulation of leaves and vegetable mould, in the hollows and at the foot of hills in woodlands, are good. In the month of November, I dig from these places, with stout hoes made for the purpose, a quantity of this material, and with wheel-barrows put it into a large heap or heaps, so that I can get at it with a sled in the winter—being exceedingly light, it will not freeze more than two or three inches deep, and if a deep snow lays on the heap it will not freeze at all. This is sleded home, a few loads at a time, and put into empty stalls, or in one corner of the shed, and used for bedding the cattle. In the morning, after the stables are cleaned out, a bushel basket or so of this material is put under each animal, and a little straw sprinkled over it. The next morning the leaves and black mould will be quite wet with urine, and this, with the solid excrements, is thrown out of the window. If the windows have a southern exposure, a snow storm of a foot in depth will not lay on these heaps twenty-four hours, owing to the powerful fermentation produced upon this vegetable matter by the urine with which it is saturated. I find this to be the very best manure I make, and although attended with some extra labor, it comes at a season of the year when it can generally be done about as well as not. In travelling the country, how many valuable deposits of this kind you will see, Messrs. Editors, where a stone wall or a Virginia fence borders a wood-lot, and that perhaps a side hill, where the accumulation has been going on for years unheeded by the owner!

In my former communication, I remarked, that lime or ashes make an excellent compost with muck, and gave an example of the value of lime and muck. I can speak in equally as high terms of ashes and muck, a compost which I have repeatedly used. A few years since, I tried what amounted to an exact experiment with this compost without originally designing it. A friend sent me a few ears of a new variety of corn, and as it did not come to hand until after my land was all planted, I took it to a distant lot where then at work, and loaded up a half cord of manure from the bottom of a stable window heap, thinking that this would give each hill a large shovelful. It only answered for about half the corn, however, and as I had a heap of muck and ashes near by, that had been recently laid up, I directed an equal quantity of this compost to be used in the remaining hills, in order to mark the result. Until July the corn treated with manure was manifestly the best, but after that the scale began to turn, and in the fall the corn dressed with the muck and ashes was much the heaviest—so much so that the difference was perceptible at quite a distance.

I have now done with this subject, Messrs. Editors, for the present; but I hope it will be followed up by other correspondents of the Cultivator.

The subject of making manure is an old one, upon which much has been written during the last few years; but this does not hinder that it should be necessary and profitable to us all to be reminded of its importance over and over again. Indeed it may truly be said to be *the practical subject of all others*, connected with farming.

I think I am warranted in saying, that a large portion of the farms, in New England at least, are still annually decreasing in fertility from the want of proper attention to this very business of making and saving manure.

You have acquitted yourselves nobly in this matter, in your volume for 1847. The editorial articles on manure alone in Vol. IV, are richly worth more than the price of the volume. I am compelled to say to your correspondents, however, that this matter ought to be oftener the subject of communications from them. There are many, very many, excellent, practical farmers in the list of your frequent correspondents, whose ideas and practice connected with this subject would be highly instructive and useful, if made known. "Help one another," should be the motto in the agricultural profession, where so much is yet to be learned. We want light in our profession—especially the light elicited from the *practice* of this profession by our intelligent, practical farmers. F. Holbrook.

Brattleboro, Vt., Nov. 10, 1847.

Winter-killed Wheat.—Wm. Little, in the Ohio Cultivator, says that his late sown wheat on corn ground, was much "winter-killed," that is, thrown out by frost, which he chiefly remedied by using a heavy roller, pressing the half-killed roots into the ground, which caused them again to vegetate. Such wheat yielded about 20 bushels per acre.

REMARKS ON BREEDING HORSES.

Editors of the Cultivator—I am perhaps only one among a thousand, who have read attentively the articles recently published in the Cultivator, entitled "Breeding Horses," and signed "Equus." I think them well prepared, and worthy of your paper; and though I am not quite sure that they were written by a practical breeder, or even an experienced horseman, I cannot doubt that the author of them is an intelligent man, and one who has devoted much time and reflection to the investigation of his subject.

I do not agree with him fully, however, nor do I know that I disagree with him entirely. He is hardly plain enough. I do not know whether he means to advocate or oppose the breeding from thorough bred stallions. I am inclined, however, to interpret his articles as against the practice of resorting to thorough breds. He seems to be privately inclined to take the breeds we have already in our country—such as the Morgan, the Narraganset, the Canadian, perhaps, and the descendants of Messenger and Duroc, and breed them among themselves, to establish a sort of home breed—a kind of "horse of all work." If so, perhaps he is right; though my opinion is he is wrong. And as different opinions sometimes lead us to correct conclusions, I hope you and your readers will indulge me while offering mine.

In the first place, then, permit me to say, that this idea of a "horse of all work," which has been so long held up by our Fair Committees and our Agricultural writers, if not altogether an abstraction, is by no means the ultimatum to be sought by all good breeders. I am confident it has misled many, and that it is still exerting a bad influence. My view is, that the existence of different species of horses, naturally suggests the idea that they were designed for separate and different purposes—and that to combine the excellencies of all in one new and distinct species is, to say the least, by far the most difficult problem of breeding—and one too, which, in my opinion, would never repay the cost of its solution.

Besides, I have never yet seen the necessity of this "horse of all work," whatever he may be, nor do I know that when he shall be produced (if he ever shall be) that we will esteem him more among horses, than we do a "jack of all trades" among men.

I would then here advise, that every person who sets out to breed horses, should first determine with himself which of the various species he would produce. I have no doubt I will be met here with the objection, that in our country we are not yet prepared for the breeding of different horses for different purposes—that this may be done only in England, and the older countries of Europe. But here I frankly take issue with the objector, and maintain that we have already a demand in our own country for three or four distinct species of horses. And first I would mention the carriage-horse, which is much inquired for in all our large cities. This is a large, stately animal, with a long arching neck, and lofty carriage; not required to do much trying service, used chiefly to drive about the city at a slow pace, to take the ladies a calling or a shopping; is seldom in harness more than two hours at a time, and seldom out of the stable more than twice in a day. He is not required to possess any great degree of hardiness, but must have tough feet, and general symmetry of form, though a little legginess, or a little too much length of carcass, will not be serious objections. What is chiefly sought, is a proud step and a noble figure, corresponding with the massive coach, and the costly equipage.

In addition to the carriage horse, there is the smaller, more graceful, more elegant, higher bred horse, suitable for the curricle or the saddle. Still it must be confessed, that though occasionally horses of this description may be sold at high prices, for ladies' saddle horses, and for the use of riding schools, &c., yet there is not so great or so constant a demand for them as for those we have first described. This arises from the fact that the young men of our country do not delight in the saddle as they should; and I cannot pass this opportunity for expressing my earnest wish that the eloquent rebuke which they received from Charles Henry Hall, in his able report to the State Society at Saratoga, will be felt and improved, so that before this generation even passes, the high mettled, almost thorough bred saddle horse, will command as many purchasers and as high prices as any other horse in market.

In addition also to these, there is in all our cities, and I might also say in all our country, a great demand for the more plebian—no matter what sort of a looking—dash away—three-minute trotting horse, used for the saddle, the sulkey, or the wagon.

And again, there is the straight-shouldered, broad-breasted, heavy quartered, large-boned draft horse, used by the brewers, the colliers and the carmen. Now I maintain that in all our large cities, several kinds of horses exist separately, are used separately, are bought separately, and consequently should be bred separately.

Will it be said that it is not wise to breed horses exclusively for our large cities—that we should look for a wider market, and hence the necessity of crossing, with a view of supplying the demand of the country at large for "horses of all work"—such as will be suitable for the farm, the carriage, the buggy, the saddle, and all? I answer, that if by this is meant we should seek to breed only a fair, common horse, not superior in any feature, but respectable enough in all, I will not wrestle with the objector, but confidently submit the question to the good judgment of your readers. But if on the other hand it is meant, that we should strive to produce a horse of such perfection that he will be equally superior in each department of service, and thus suit every purchaser, I will repeat the opinion, that this, if practicable, is an object too difficult of attainment to be profitable. Indeed, I will go farther, and insist that this would be an object virtually impracticable, because, in all probability, it would be thwarted as soon as attained: for such a horse, instead of remaining in the hands of the farmer, the mechanic, or even the villager of fortune, and used to promiscuous service, would undoubtedly command a price that would transfer him to the stables of some retired merchant or wealthy gentleman, of one of our large cities, where he would be exclusively devoted to one particular department of service, so that after all the expense and pains of breeding him a "horse of *all* work," he would in fact live and die a horse of *one* work.

But perhaps the reader, weary of the argument, is willing to indulge me in the opinion that it is better to breed horses separately, with a view of obtaining the higher prices offered in our city markets. But with the admission he asks, how is it to be effected? I answer that it is difficult indeed for any man to lay down any definite or certain rules in the matter, and I am by no means prepared to go any farther than to offer a few ideas on the subject, for which I shall claim no other authority than that which shall be accorded to them by the good sense of your readers.

If then, for instance, it is required to breed a carriage horse for the city market, I would in the first place advise the breeder to use great care in the selection of the mare. It will not be enough even, that the animal possesses in herself the main characteristics desired in her progeny; it is necessary also that her whole family—dam, sire, brothers, sisters and all—shall possess them in their main features. She should be an animal, seven or eight, or nine years old, every way sound; should have a fine long arching neck, a sleek coat, a docile temper, short legs, heavy bones, body long and deep, rather compact than loose. I would not have her ribbed up too closely, for this is objectionable in either mare or horse, but a mare should be rather close than otherwise, because this is desirable in her foals; and if there is sufficient length and depth of carcass, there is no danger but the colt will be large enough, though the dam be quite well ribbed up. The mare should have close, good action, a prominent eye, a deep flank, *large milk veins*, and a thick mane and tail; and as I said before, these should be the general characteristics of the family from which she sprung.

Having secured such a mare, or one similar, (which I can assure the breeder will be a work of patience and expense,) he should send her to a thorough bred horse—by all means to a thorough bred—one of the thoroughest of the thorough breds—not a mere gaunt, *scrawny* race horse, whose dams and sires for four or five generations previous, have never got a foal until after they were worn out on the course; but he should send to a *right gallant* thorough bred—one that takes after the old patriarchs of his family—that is staunch and sound, with plenty of bone and substance, and all the resoluteness of action consistent with docility and good temper.

If, after following to any reasonable extent, these directions, any man shall breed mean animals, I will cheerfully throw up my theory, and at once turn my attention to the breeding of mules and oxen. Perhaps, indeed, the immediate result may not be *all* the breeder may desire—perhaps by breeding from one of her selected half bloods he may improve upon his first generation, by obtaining better mares, or rather mares more assimilated to the thorough bred with which he started—perhaps, too, he may produce mares from the selected half blood, that will breed with more certainty and sufficient fineness from other half bred stallions. But I am sure he must return in season to the family of his original thorough bred, or one similar to it, or otherwise his stock will inevitably degenerate. I would give similar directions for the breeding of some of the other species of horses mentioned above, but this article is already too long, and if more shall be said, it must be said at another time.

Syracuse, Nov. 1847. JOHN BARBER BURNET.

NOTES OF A TRAVELLER IN GREAT BRITAIN—No. 8.

AGRICULTURE OF WALES.—The agriculture of Anglesea, in some parts, is in a very advanced state. Many of the estates of the landlords and gentlemen, are in a very high state of cultivation. That of Hon. W. Owen Stanley, member of Parliament, near Holy Head, is under very excellent and even superior tillage and cropping, equal to almost any seen in England. His walls and hedges are in admirable order, and every thing betokens the gentleman of taste, as well as agricultural skill. The domain of the Marquis of Anglesea, near Menai Bridge, also evidences great care and attention; and shows that right directed effort in Anglesea, will secure results equally satisfactory to those made in other portions of the Kingdom. Most of the farms are of medium size—varying from sixty to three hundred acres. The system of tithes, which for years caused great disquietude in North Wales, and had a very injurious tendency upon the improvement of the country, has been changed to a commutation, which has proved, I am told, very beneficial. The tenant is now at liberty to make improvements, and realize to himself all the benefits resulting from them, instead of sharing, as heretofore, in the profits with the landlords, while all the expenses were borne by himself. There are still various restrictions in their leases, some of which are very unwise, and alike injurious both to landlord and tenant. The right of gaming, which is preserved on most of the estates, by which the landlord has the exclusive privilege of hunting, and the tenant is prohibited, under heavy penalties, from destroying the game, however injurious to his crops. Observing in a grass field, where some laborers were mowing, that the grass had been very much injured by the passage of hares through it, I inquired of the farmer why he did not kill them. His reply was, that the law was quite as severe for killing a hare as for felony, and that he was forced to submit to these depredations upon his crops year after year. In many of their leases there is a clause binding the tenants, on each farm, to keep two hunting dogs for the landlord, and to have them ready when the season for hunting arrives. They are collected from the different farms to the game-keeper's quarters, where a fine building is erected, far superior to the cottages of the Welsh tenantry—lodgings for game-keeper and grooms, stables for horses, granary, fine quarters for the hounds, large iron kettles to cook provisions for them, slaughter-houses where the old horses are killed, and every other convenience necessary for the landlord and his friends. When the day for hunting arrives, they go forth over the lands, without regard to crops, and frequently very great injury results to the tenant, and for which he has no redress.

The implements of husbandry are in general quite rude. The Scotch plow, however, is used, and the work is generally well performed. The principal crops raised in Anglesea, are oats, barley, rye, wheat, peas, potatoes, turneps. There is a great objection among farmers to buy for their own consumption, and they raise a variety of crops, though some of them do not realize very satisfactory returns. The weeding of crops is practiced to some extent as in England, and many of their fields present a very neat and clean appearance. There are different methods practiced in sowing wheat. Drilling to some extent is adopted; but broadcast sowing on the furrow, I should think the most common. In gathering the wheat, the reaping hook is most generally used. Sometimes the grain is cut with the scythe, and the cradle is occasionally used. An opinion still prevails among the ignorant, that cradling grain is *forbidden* in scripture, though I did not learn in what part of the Bible the prohibition could be found.

Of their grass crop, the yield when I was there, was very light, and their meadows would almost realize what has been said of Wales—" That a man may mow in them all day, and carry home his day's math at night." I was told that, in some meadows, the mark of the swath continues from year to year, and on some farms I should think, from the appearance, that there could be no doubt but it is so. Their implements for mowing are very rude and awkward. A straight and clumsy snath, very broad scythe, secured at the bottom of the snath with an iron rod from the snath to the back of the scythe. This, however, is deemed the apparatus best for their lands. A Welshman who had lived with me in America, and who was a very expert mower with one of our patent snaths, told me he could do twice as much, when I saw him mowing in Wales, if he had his old snath and scythe. I have no doubt he could do so, from a trial I made with the Welsh implements.

As a substitute for grass, they use *Gorse* as a food for their stock. This has been in use in Anglesea, and some other districts in North Wales, from time immemorial, as a food for horses. It has occasionally been used, when provender is scarce, for horned cattle. When used, either by itself or with provender, as food for milch cows, it proves highly beneficial. It is a coarse evergreen shrub, growing to the height of two or three feet generally, and propagates itself. It gives to milk and butter a fine color and rich flavor. It is the opinion, that cows yield a better profit than when fed on the best grass or even turneps. The butter is certainly most excellent, as I had an opportunity of testing, equal certainly, if not superior, to any I ever tasted. It is fed to some extent, with turneps, to sheep. Its principal use, however, is in feeding horses. It grows abundantly in all parts of Anglesea, and frequently saves the farmer from great loss, when their is a failure of his other crops. It grows luxuriantly in the thinnest, coolest, and most sterile soils. It can be used either of one or two year's growth. With attention to its culture, and keeping it from injury from sheep, who are very fond of it, it will produce, when cut every year, from eight to fourteen tons per acre, of good, succulent food. And if cut every second year, it yields at the rate of from twelve to twenty tons per acre. There is no crop which furnishes so abundant food as this, with a very trifling outlay. In many parts of the district very little attention is given to its culture, and it is suffered to grow without any care, and yields a much smaller crop than when judiciously managed. H.

UNDER-DRAINING.

At the last meeting of the Hartford County (Ct.) Ag. Society, we had the pleasure of listening to an excellent practical lecture on the subject of *draining*, from Prof. John P. Norton, of Yale College. Having been requested to deliver an address before the Society, Prof. N. decided to confine his remarks chiefly to this subject, instead of discoursing upon agriculture in general terms. The decision was in our opinion a very proper one. Draining is comparatively but little practiced or understood by our farmers; though it is an admitted fact that it constitutes the basis of the great improvements which have been made in British Agriculture within the last half century. During a residence of several years in England and Scotland, Prof. Norton had the best opportunity for witnessing the benefits of thorough drainage, and of becoming acquainted with the best modes which are practiced in those countries. His knowledge of the subject has, therefore, enabled him to treat it in the most satisfactory manner, and we think we cannot do a better service than to lay his remarks, which he has kindly furnished us, accompanied by some illustrations, before our readers:

The subject which I have selected, as one of much interest to a large portion of the farming community, is that of Draining. During a long residence abroad, my attention has almost daily been called to the drain, as in many situations the basis of all good farming. I have seen and admired the results of its introduction, in almost every part of Great Britain. Since my return to this country, each district which I have visited has also reminded me of the drain, but unfortunately—of its absence, or extremely partial employment.

Drains, in their various forms, are, as is well known, channels for conveying away water;—the first consideration that presents itself then, is—in what situations are these channels necessary? They are obviously so in marshy swampy grounds; these cannot be managed at all without them. But there is a class of wet springy soils, sufficiently firm to walk upon or even to plow, which are frequently, in this country at least, considered dry enough. The grass grown upon them is sour and scanty, and all attempts at vegetation are imperfect; the soil is continually saturated with water, while the air obtains imperfect access; various noxious acid compounds are formed in consequence, and plants live with difficulty. The sun's rays warm such a soil very slowly, and it is only when the best part of the season is past, if at all, that it approaches to a proper state of dryness. When now the drain is introduced, it draws the water gradually away from beneath; the air follows from above, and comes in contact with all the noxious compounds which may have formed; it decomposes them, and they become, in most instances, fit for the nourishment of plants. From the land in its wet state a constant evaporation was going on, which prevented the rays of the sun from exerting their full influence; now there is no such evaporation, and the warm air can penetrate even into the subsoil.

The foregoing cases, are of soils made wet by springs; these, however, form but a small class when compared with those that are injured by retaining too much of the water that falls from above. In stiff clays these injurious effects are very manifest. During the whole early part of the season, they are saturated with water, and consequently cold; any attempt to work them only does mischief, by puddling the whole soil into a species of mortar. When the season is far advanced, the surface dries, and at the same time becomes baked into clods, which are only broken up with very great difficulty and expense. But it may be doubted whether drains would have an effect on such stiff soils, whether the water would run into them. Their action first commences on that portion of the soil which lies next the sides of the drain; this gradually dries, and as it consequently contracts, innumerable little cracks are formed, through which the air obtains access to a fresh portion; this process goes slowly on, until at last the whole mass of clay within the influence of each drain continues perfect, though in some instances, they do not pervade the entire soil until at least a year after the drains are made. Some of the stiffest clays in England and Scotland, are now drained most effectually, and with great ease. The full benefit of draining upon such clays, is not by any means confined to making them dry. Air and moisture acting together, produce various chemical changes in the soil which gradually ameliorate its physical character; rendering it less stiff, and more easily pulverized. I have seen many instances, where careful management, and thorough draining, have made wonderful advances toward the entire subjugation of the strongest clays that are ever cultivated.

It is not only on these stiff clays that a surplus of rain water is injurious. There are many soils in which—though dry at the surface, and to the ordinary depth of the plow, water always stands below a certain limit; this results either from the presence of a close retentive subsoil, or from the peculiar formation of the ground. Below this level, wherever it may be, there is no circulation; air cannot penetrate, and the same stagnation ensues of which I have before spoken, accompanied by the same hurtful effects. When the roots of the plant, pushing downward in search of food, come to this level, they stop; the instinct of nature forbids them to proceed in a direction where no proper nourishment is to be obtained; only a few inches of the surface therefore are available for their support, and unless that surface is very rich, the crops cannot attain to any great luxuriance. In time of drouth, when this scanty surface soil becomes dry, the roots are forced to descend lower; but the substances which they unwillingly receive and convey into the circulation of the plant, are destructive to vegetable life, and if the drouth continues long are fatal to the crop.

The summer of 1845, was extremely dry in many parts of Scotland; it was then found that in all ordinary cases, drained land withstands drougth better than that which is undrained, because of the greater depth of soil available for the plant. During the season two neighboring fields of oats, near Inverness, were alike in all things except that the soil of the one remained undrained. The crop upon the drained field, continued fresh and green, though it did not of course yield so well as it would have done in a more favorable season. In the undrained field a large portion of the plants withered and died; this took place particularly in the hollows between the ridges, where they reached the subsoil first. The quality of the grain which did come to maturity was poor, and a subsequent comparison of analyses made upon samples taken from the two fields, showed a decided inferiority in that which was undrained. It is now a proposition regarded among the best English and Scotch farmers as completely established—that drained land is not only better in wet seasons, but in dry seasons also.

There are sections, where it is necessary to introduce drains, even when no excess of water is present. In some parts of England and Scotland, a deposit or band, of iron ochre and other injurious substances, is formed at various depths from the surface. This deposit is sometimes very hard, and of great thickness: it is of course, even when forming a layer of not more than an inch, an impenetrable barrier to the roots of plants. When broken up by the plow, it forms again at a somewhat lower level in a short space of time. The only method which has been found effectual, is to put in drains at the usual distances, as if to free the land from surplus water, and afterward to break up the land with a subsoil or other plow. The rains then filter through the soil into the drain, dissolving the broken fragments, and carrying away gradually the whole deposit. This action is more or less beneficial on all soils. Where a field has been long in cultivation, a hard layer usually forms immediately under the limit to which the plow reaches; this gradually becomes nearly impervious to the roots, but when once effectually broken up after the completion of drains, soon disappears. The depth of workable and profitable soil, is nearly as great as that of the drains themselves, and the farmer by increasing this available depth, increases his capital; for he augments the capacity of his land to bear good crops without exhaustion. The manures which are applied upon the surface, are also much less likely to seek beyond the reach of the roots; even those parts soluble in water are almost all appropriated by the plant, or enter into some chemical combination in the subsoil, in passing through so greatly increased a distance before they escape. When undrained land, on the contrary, becomes saturated by the falling rain, the water still increasing, at last runs away along the surface, carrying manure and valuable soluble portions of the soil into the roads, or upon adjoining fields. The richest part of the land, the surface, is thus robbed of what constitutes a large portion of its value.

Before leaving this part of my subject, I may mention, as proving the efficacy of drains in carrying away soluble deleterious ingredients, an instance which fell under my observation on the estate of Ballochmyle, near Paisley, in Scotland. The proportion of iron present in the soil was so considerable, as to be a serious injury. When drains were introduced, the quantity carried away was very great. In the soil it existed largely in a state called Protoxide of Iron; in this state it is soluble in water, but when it comes in contact with air, it immediately absorbs oxygen, (a species of gas,) and becomes Peroxide, (or common iron rust;) in this state it is no longer soluble in water. When, therefore, the water from the soil charged with Protoxide of Iron, entered the drain, and came in contact with air, the Peroxide was formed, and immediately settled down to the bottom as a red powder; it was so abundant in this case, that the drains soon became obstructed by it, and the proprietor was obliged to make openings at the upper end of each, for the purpose of introducing a powerful stream of water: this washed out the Peroxide of Iron in large clots. It was necessary to repeat such an operation occasionally, as fresh quantities soon accumulated.

This is not the place to enter into many chemical details respecting the action of air and water upon the soil; the combinations which are broken up and entered into, would be too complicated, even in the present imperfect state of our knowledge respecting them, and too purely scientific for a mixed audience. I will therefore at once proceed to give some information as to the manner in which drains should be made, of what materials, and how far apart they should be placed.

In many parts of New England, stones are so abundant, that even the resource of walls, almost unexampled in magnitude, proves insufficient for their entire disposal. In such cases it may be advisable to employ stones for drains, even where other materials can be obtained at cheaper rates. Stone drains, when properly constructed, are as durable as any others. Smith, of Deanston, the great originator of the present system of thorough draining, says that the stones should be small, none much above the size of a hen's egg. The bottom of the drain should be about six inches across; and from six to eight inches in depth of these small stones, should be thrown in. Turfs cut thin and very carefully, so as exactly to fit, should be laid on the top, overlapping each other, and the earth *rammed down hard*, as the object is to prevent entirely the access of water from above; it should all filter in at the sides, for if it finds an entrance at the top, sand and small stones will wash down, and eventually choke the drain. On most farms in this section, a sufficient number of small stones may be found on the surface of the fields. If large stones are employed, the sides are much more liable to breaking, and such drains also become the resort of rats and mice, whose holes greatly increase the danger of obstruction. The water from a well made stone drain, should run nearly or quite clear even after heavy rains.

Mr. Smith stated, that he has them which have been in operation for twenty years, and have required, during that time, no repairs whatever. Where no small stones are to be found, it is necessary to break larger pieces with the hammer, as is practiced in the making of macadamized roads; an operation which adds greatly to the expense.

To meet this difficulty, the expedient has been devised of making clay pipes. These carry off the water effectually, and at the same time lessen the cost of the drain. The tiles first used were made in a horse-shoe form, each piece being about fourteen inches in length, and having a flat sole of corresponding dimensions to place under it, and prevent sinking in the soil, or undermining by currents of water. These were much more cheaply transported than stones, one load going as far as 5 or 6, and the cost of digging was also considerably reduced; for the tile, being only about 4 inches wide, occupies a bed much narrower than the stone. The several pieces of tile were joined together in the bottom of the trench, and formed a connected channel for water. The earth was compactly filled in, and the water found its way through the joinings of the pieces. These tiles were very effective, and have been employed to an immense extent in all the better cultivated parts of Great Britain and Ireland. Whole counties are now underlaid by them, and some of the most enormous incomes have been doubled by this simple improvement. At present, however, another form of tile is coming into general favor. It is a simple round pipe, made in lengths like the first, and for the cross drains of not more than an inch and a half in the diameter of the bore. These can be made much cheaper than the other kind, as they are smaller, and all in one piece. They are not more than half the weight of the old fashioned tile and sole, and therefore an additional saving is affected on the transportation. The trench for their reception is also much smaller, being at the top just wide enough to allow the trencher to work, and cut at the bottom with a narrow tool, to exactly the proper size for the reception of the pipe. The pieces are simply laid end to end, and wedged with small stones when necessary. The water finds its way in at the joints. Many have expressed doubts as to the operation of these drains, thinking that water would scarcely penetrate into so small a channel, through such minute apertures. No difficulty has been experienced in any case. One gentleman, residing in the south of England, who has employed these small pipe tiles in draining exceedingly stiff clays, laying them at the depth of three feet, and ramming the clay hard down, offered a premium of £100 to any person who would keep the water out of them. These tiles, of both varieties, are made by machinery. The clay is worked in an ordinary pug mill, such as used in brick-making, care being taken that no stones are present; it is then forced through a die of a circular or horse-shoe shape, according to the kind of tile intended to be made. It passes through in a continuous stream, which is cut off into the proper lengths by hand, or by a little apparatus connected with the machine. After drying sufficiently, they are burned in a kiln. By the use of machines, and by manufacturing on a large scale, the price of tiles has been brought very low. In some parts of England, the small round pipes now cost only ten shillings, or $2.50 per thousand, each tile being fourteen inches in length. This would make them only about four cents per rod. There is no doubt that should the demand be great, they may soon be obtained here at as low rates. I hope to receive in the course of a few weeks such information from one of my Scotch friends, as will enable me either to give directions for the making of the best tile machine, in this country, or for the importation of a small one from England as a model. If the farmers only call for them in great quantity, I have full confidence that our American mechanics will soon improve upon the best English model that can be obtained. Even at $5.00 per thousand, or eight cents per rod, the employment of tiles would be cheaper than that of stones in most situations, unless they had to be transported many miles. It is moreover, much easier for inexperienced persons to cover them properly. In the Repository of Arts in this city, are to be seen several of the horse-shoe shaped tiles; they are made, I understand, at Enfield, but there seems to be no soles accompanying them, and I do not know their cost. It may not be inappropriate to mention in this connection, the importance of such an institution as this Repository; it is now in its infancy, but if patronised as it ought to be, will become a place where models or specimens of such useful articles may be found,—a place of reference for all professions.

We now come to the important question—How deep should the drains be made, and how far apart? Smith, of Deanston, and many distinguished British farmers agree in the opinion, that the proper distance of separation is from sixteen to thirty-six feet. That first named is proper on stiff clay soils, and the latter only on those which are very light and sandy. From eighteen to twenty-four feet, is, I should think, the more common distance. Upon the subject of depth, great diversity of opinion has been expressed; but I believe that all of the best farmers are now united in the conviction, that shallow draining is in the end bad economy. One of the principal benefits derived from the introduction of the drain, is the deepening of the soil, as I have before explained. But this benefit is never fully, and in many cases not at all felt, until the drain is followed by the subsoil plow. The layer of earth immediately over the drain, should never be disturbed; if the plow breaks it up, particles filter in, and soon impede the exit of water. It is clear, therefore, that the tiles or stones should be laid so deep that the point of the plow cannot approach within four or five inches of their upper surface. The improved implements now in use for subsoiling, go down in some instances as far as twenty inches. Our farmers may never have gone more than ten, but they ought not, by putting in shallow drains, to preclude themselves from the ability to adopt improvements in this direction. Another argument against such drains, is the fact that they do not draw as well as the deeper ones, nor dry so wide a surface. I have known repeated instances where farmers who had made them shallow, were so disappointed in their efficiency as compared with deep ones, that they went to the great expense of taking them up, and relaying them some inches deeper. From twenty-six to thirty-six inches, is the depth ordinarily employed at present, although some maintain that four feet or four and a half is still better; this, however, seems carrying the matter to excess; and there can be no doubt that at distances of from sixteen to twenty-four feet, drains at a depth of from twenty-six to thirty-six inches, will dry the stiffest and wettest land.

Several plows have been contrived for the purpose of cutting the drain trench at one operation. These are drawn by from eight to twelve horses, and following an ordinary plow take out the earth to the depth of from eighteen to twenty inches. A few inches more are then removed by the spade. This plow is said in some parts of Scotland to have greatly reduced the cost of trenching, but has never been generally introduced. I should think it too unwieldy and expensive an implement for this country.

It may be useful to introduce here cuts (figs. 5 and 6) of the various spades and other tools used in cutting the tile and stone drains, and sections of the drains themselves:

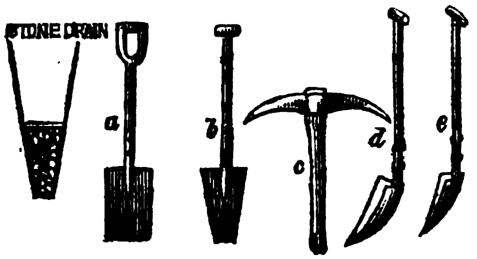


Fig. 5—*Draining.*

Explanation.—*a.* First Spade, common shape.—*b.* second Spade, which follows the first, and is narrower. —*c.* Pick, used when the subsoil is stony.—*d.* Large Scoop-Shovel, for removing the loose earth after picking.—*e.* Smaller Scoop-Shovel, for the bottom.

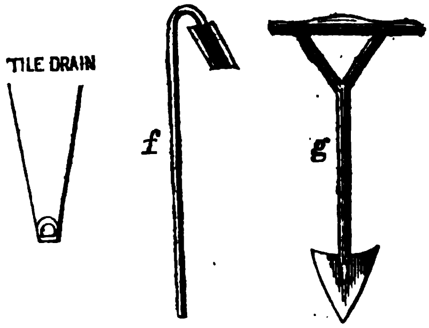


Fig. 6—*Draining.*

Explanation.—*f.* A flat Scoop, with turned-up edge, for cleaning out the bottom.—*g.* A Flauchter Spade, used for cutting turf to cover the small stones in the Frequent Drain.

The old theory as to the location of drains was, that they should run *across* the slopes, so as to cut off the springs and catch the descending water. This method is now, however, entirely abandoned in all the best districts of England and Scotland; the drains are run *straight down* the slope, exactly parallel to each other, and without reference to wet or dry spots, excepting sometimes a short branch to a strong spring. The layers of earth in the subsoil generally lie in such a direction that the water flows from them at a more uniform depth, into the straight than into the cross drains. The accompanying cut (fig. 7,) shows how the layers run into the cross drains at unequal depths. A drain straight down would cut them all to the same level.

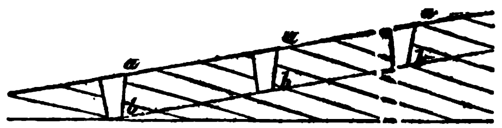


Fig. 7—*Draining.*

In those directed straight down the slope, the current is also greater, and usually suffices to wash away any small obstructions; should they become quite stopped, however, the great pressure will cause them to burst out, and show where the mischief really is. In cross drains the descent is slight, and they may remain choked for a long time before the cause of evil is discovered.

Where the declivity is very gentle, the drains made of small stones do not work well; it is in such cases necessary to employ tiles. Mr. Smith says, "that with careful management a drain will act efficiently when the fall is only four inches per mile." At the foot of each declivity, or half way down if it is a long one, a main drain made of large tiles, or built of stone with a smooth floor, should run across to carry away the water from the small drains; these should not be of a great length without thus discharging, as the friction against the sides of so small a tube, unless the descent is considerable, seriously retards the flow of water. Such main drains should be sunk three or four inches below the small ones. Tiles of a large size are made expressly for them.

Having thus explained the structure, and the theoretical advantages of the drain, it is necessary to say something more definite as to its practical benefits. The farmer who cultivates his land for a subsistence, must always fall back on this inquiry—will this improvement repay me? Profit must be a test of success with him. The verdict of this class in England, Ireland, and Scotland, is most decided. During the last year of my stay in those countries, I visited districts where the utmost efforts of the tile works could not supply the demand. The farms are almost all in the hands of tenants, but the landlords generally bear a part of the expense of draining: in some cases they furnish the tiles, if the tenant will do the cutting and filling of the trenches; in others they allow a certain per centage of the amount expended. The landlord feels that the permanent improvement of his land by this simple process is so great, that he is willing frequently to bear much more than half of the charges. In Scotland, where long leases are prevalent, tenants do not hesitate to drain entirely at their own expense, especially towards the commencement of a lease. Many of them state that the increased produce repays the whole cost of the improvement, in from two to three years. Five or six years was the longest period that I heard stated, and that only in peculiar cases. The actual outlay in the operation, of course varies greatly on different soils, and with the distance of the drains from each other, but it may be stated generally at from £3 to £8 per acre, or from $10 to $40. This gives little information as to the probable cost in this country, as our rates of labor and modes of working are entirely diverse from theirs. The extent to which some large tenants and proprietors have carried their operations, is far beyond anything that single farmers here can do.

In 1846, I visited the farm of Mr. Dudgeon, of Spylaw, at Kelso, near the English border. The surface soil was stiff, and the subsoil almost impervious to water. He had then drained about 900 acres, and the length of drains was nearly 300 miles. His landlords defrayed about half of the expense. He had a tile work which turned out from 4 to 5,000,000 tiles in a year, but not sufficient to supply his wants. He was then in the beginning of a new nineteen year lease, and was draining as fast as possible, in order to reap the utmost advantage. The drains immediately raised the value of his land from a rent of $2.50 per acre, to one of $6.50. Owing to their ameliorating and drying influence, he had fine crops of turneps on stiff clays where it had never before been thought possible to grow them. The system of draining across the slopes had been tried on this farm, but abandoned as ineffetual in comparison with Smith of Deanston's method. He was even going over those fields anew; at the time of my visit workmen were cutting straight down one of the slopes, across the old drains. Mr. Le Roy, a proprietor in the same neighborhood, h
in about 250 miles of drains on his own estate, t
increasing the rent of many of his farms from
$14 per acre. These were men of large prop e
Instances of equal or even greater success on
scale, are frequent in many districts. In tr
over an unusually large portion of Great Brita
hearing the experience of a very great number

practical men, I never met one who was disappointed in the result of efficient, thorough draining.

The manner of carrying out improvements, and the extent to which they are at once adopted, must necessarily be very different in this country and England. Our farmers are mostly proprietors of moderate means, each managing his own land. We have no tenants who are willing to pay eight or ten thousand dollars of annual rent, when that sum would purchase a suburb estate in the west. Our farming being on so much smaller a scale, the improvements must be more gradually perfected. They may, however, and in this instance ought to be, of a similar character. The remedy for wet cold land is the same here as there, and there are few of our farmers who could not in the course of each year, find time to accomplish something; even without increasing, to any material extent, their usual force. Half an acre or an acre of drains might surely be put in annually on almost any farm, and I have little doubt that he who commenced by one acre a year, would not long be contented without doing more. It is of much importance, that what is done be done *well*. The desire to go over a large surface, should not induce the improver to go over it in an imperfect manner. I have known instances where the drains were put in at double the proper distance, with the intention of finishing from the profit of the first operation. The sequel of such unwise economy is almost always the same. None of the ground is thoroughly drained; the land is still in a state unfit for the most advantageous cultivation; the profit that ought to be derived from draining, is only in a comparatively small degree realised, and the money invested is returning but a poor interest on the outlay. The prospect of a little saving, ought not to be an inducement to neglect the best mode of construction. Due care in the laying and filling, make a difference of many years in the time of duration. In the covering of stone drains particularly, no pains should be spared.

The subject of draining is peculiarly important in this section, where there is so much wet heavy clay land. A large extent of it lies nearly in a state of nature, so far as regards the adoption of effective improvement. On many wet fields in the hollows, there is scarcely any sustenance for cattle, and a large proportion of the hill sides produce only a scanty innutritious growth of grass. Even much of the land that is mowed, produces but a small part of what it would bear, were it not so wet. The land which thus lies entirely idle, or comparatively unproductive, is in many cases of the very best character, strong and deep; the hollows and flats generally are richest, because they receive the washings from the hills.

Improvements upon such soils pay the improver better than any other, because the gain in value is so great. Land which is tolerably dry, produces an increased crop after draining, it is true; but in that which was nearly worthless on account of a surplus of water, the whole crop is a gain. What would pay a better rate of interest than a ton and a half of hay per acre, from land before of little value, even as pasture? I have known instances in Scotland, where in cases of this character, the first crop repaid the whole expense of improvement. Suitable materials for the manufacture of tiles, can be procured in this section with great facility, and if there should be a good demand, they would in a short time be afforded at low rates.

But time admonishes me that I should draw toward a close; the subject is not by any means exhausted, but I think that enough has been said to show the propriety of combining theoretical with practical knowledge. Draining, as now described, becomes a science; giving full scope for investigation, and long courses of elaborate experiments, and I trust that all are convinced, that the results of such experiments may be communicated in a form quite intelligible, even to those who have not turned their attention to scientific subjects. It has been my object to show, that what is ordinarily termed book farming, may yet be practical; and that it may offer results worthy the attention of those who depend for a livelihood on the profits of their profession. Among the best farmers abroad, I heard but one voice as to improvements; it was always the remark that those who farmed *highly*, made most money. That is—those who reasoned most upon their pursuit—who studied the causes of good or bad crops—who availed themselves of every source of information, and who expended the most money judiciously upon their lands, always obtained the largest profits. A stress should be laid upon the words *judicious expenditure*, because we see some in all communities, who enter into improvements rashly, and without due precautions. The failure of such ill-advised attempts, exposes a good cause to ridicule. I would not, however, be by any means understood to say, that all farmers should become scientific men; that is clearly impossible; but they may through lectures, or through books, acquaint themselves with the great principles upon which the cultivation of the soil should be grounded; may obtain an idea of the nature of the substances with which they have daily to do. Such knowledge as this is simple, and can be attained even by an intelligent child, of twelve or fourteen years.

Diseases of Animals.

FOUNDER IN HORSES.—A writer in the S. W. Farmer says that he rode a hired horse 99 miles in two days, returning him at night the second day. In the meantime he had been deeply foundered, but so effectually cured that the owner would have known nothing of it, if he had not been told. In other cases he was nearly as successful. This is his method of cure:—Bleed him immediately in the neck, according to the severity of the founder—in extreme cases, as long as he can stand. Then draw his head up, and with a spoon put back on his tongue salt enough till he has swallowed a pint. Let him drink moderately. Then anoint the edges of his hoofs with turpentine, and he will be well in an hour. The salt operates as a cathartic, and with the bleeding, arrests the fever.

PUERPERAL FEVER IN A COW.—It is stated that some apparently hopeless cases of this disease have been cured by a compound of ether with cathartics. In one case, where there was every appearance of speedy death, by repeatedly administering these medicines, the cow in thirty-six hours got up and began feeding, and was quite well in a week.

DISEASE IN A COW'S UDDER.—In the month of May, 1846, I had a beautiful young cow, that gave over twenty quarts of milk per day, injured in one of her teats to such an extent, that the milk could not be drawn, and in consequence suppuration of the bag ensued, and I lost the use of her. Some two weeks after the injury, I lanced the spot where the first indication of suppuration appeared, and I repeated the opening four or five times afterwards, at different periods and in different places, with good results; but the bag continued to yield pus for ten months. Now I wish to learn whether, if I had opened the teat through the milk-passage, at the proper time, the teat might not have healed, and the cow been saved from the butcher? Would not a compress, secured by a tarred cloth, prevent the spontaneous flow of milk in such a case as is alluded to in your answer to the inquiry of J. L. R., in the last volume of the Cultivator, page 287?

AUTOGRAPH.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY JOHN J. THOMAS.

The Pear Blight.

THE past season has been unusually destructive to the pear tree. In some gardens, scarcely a tree has wholly escaped; and in many instances entire trees have been destroyed. The frequency and extent of this disaster is likely to prove a serious drawback on the general cultivation of this delicious fruit, which otherwise would rank, perhaps, second to none in importance.

Doubts of the correctness of received theories of the blight, seem to be rather increased than diminished with this increased prevalence. Every additional fact must be of importance, as every new aspect of the disease, whether for or against established theories, will enable us the better to look for a remedy.

The *Blight* in the pear, is another name for *death*. When a branch suddenly dies, from whatever cause, its leaves turn black. If the limb be girdled, or lopped by breaking, or destroyed by insects, or poisoned by disease, the same external appearance is presented. But the infusion of poison may blacken the leaves more suddenly than mere mechanical causes.

Two theories, it is well known, have been extensively adopted, viz: those of the *insect-blight*, and the *frost-blight*.

1. The first, which has been known for many years, and more especially adopted in New England, ascribes the mischief to an insect which, though very minute, or scarcely the tenth of an inch long, girdles a considerable portion of the interior of the branch, and thus cutting off, in part, the supply of the sap, when most wanted at a rapidly growing season, produces local death. Actual observation has proved that this insect is, in some cases, a cause of death in the branches of the pear. It must be so, however, to a very limited extent, as no traces of its work are seen by the closest microscopical examinations of affected branches, in most parts of the country. It also usually happens that a very large part, or nearly all of a branch, must be cut across to produce death, as any one may prove by the use of a knife; hence it may be reasonably doubted if so minute an insect could always operate to a sufficient extent to produce the disaster, unless it infuses poison, of which there appears to be no evidence of a positive character.

2. The most usual form of the disease is what has been of late years known under the name of *frost-blight*, or *frozen-sap blight*. This has been accounted for on the supposition that the severe frost of late autumn or winter, so affects the sap of unmatured branches as to destroy its healthy character, or to induce a change similar to that of fermentation, and thus to poison, instead of nourishing, the growing branches. This is supported by the following facts:—

1. Blight most usually attacks trees of late-growing or unmatured wood, or of such varieties as are not of compact growth. Hence trees on very rich or moist soils, which continue to grow luxuriantly till cold weather approaches; or such as have been checked at mid-summer, or pruned late, so as to produce a late second growth; or such as are remarkable for porous or spongy wood; are eminently liable to its attacks. The Madeleine and Bartlett have unusually spongy branches, and have long been known as extensive sufferers; while on the other hand, the Seckel and Summer Bonchrietien, (though the latter is a rapid grower, it is of very close, compact growth,) have rarely been known to be attacked. Whether the frost operates on the sap only, or on the unripened wood, or on both, is not a matter of so much consequence as the fact, extensively proved, that good healthy trees, on a dry soil, of moderate fertility, well cultivated, so as to produce a fair growth early enough to ripen thoroughly, are generally much safer from blight, than those under the unfavorable circumstances just mentioned.

2. Blight has usually been found to prevail most extensively after severe winters, preceded by warm, moist autumns; and has also in some cases been noticed to be very general within a few days after very severe night frosts at the commencement of summer, when the new, tender and succulent shoots are easily affected. The latter result was particularly noticed in 1844. It has also been since observed to follow immediately severe frosts at the same season of the year, which were not noticed by any but early risers; and in one case, a frost was accidentally noticed near midnight, but was dissipated before morning by a warmer wind. Several cases of blight were soon after observed. This last form of blight, which perhaps is direct and immediate death from the freezing of the young shoots, must be somewhat different from the true frozen-sap blight, which often is not conspicuously manifested till several months after the first injury. It may often happen, however, that the diseased and fermented sap, from a frost-killed and succulent shoot, may run down the larger branches, and rapidly spread the evil of its poisonous influence. As a consequence, though numerous cases may suddenly follow the frost, the disease may prevail more or less from the same cause, for several weeks afterwards. This result has been observed in two very distinct instances within a few years.

There appear to be some cases of death in the branches of the pear not satisfactorily accounted for by the above theories. P. Barry, in the *Gen. Farmer*, states that on his own grounds the blight has been uncommonly destructive the past season, attacking many healthy trees on hard dry land, with well ripened wood, including the Seckel, which has been thought by many to be proof against the disease. It is true, the land where they stood had been highly enriched by manure, but this did not cause a late unripened growth the previous autumn. But the following fact is worthy of notice: "In close proximity to these trees, stood thousands of young nursery trees, not one of which was affected." Why should large trees, which ripen their wood so much better than young and rapidly growing ones, be alone affected? The only tree on the grounds of the writer, at all injured the present year, was one of rather slow growth, standing on drier and firmer soil than most of the rest, which escaped. Not the slightest mark of an insect could be discovered.

In connexion with this subject, it may be stated that apple trees, as well as quince and hickory, have been extensively affected. But with the apple, the disease does not appear to extend down the branches as with the pear, but to be confined to their extremities. We cannot discover, after much observation, that one sort of apple tree is more affected than another, although mostly confined to *old* trees; nor that warm frosty valleys, where vegetation is most rapid, and cold most severe, on clear nights, favor the disease more than other localities.

During the present year, the greatest number of cases were noticed to have occurred after a number of days of very hot, dry weather, towards the latter part of summer, when the trees had passed the season of their greatest rapidity of growth. Even the Osage Orange, supposed to be secure from insects, was affected late in the season.

Whether in the preceding cases, the mischief had been commenced the previous winter, and was slowly advancing in progress, until it was suddenly developed, in the midst of summer; whether old or feeble trees are in some cases more liable than young and thrifty ones to the combined influence of cold, and the heat of summer; or whether this disaster is not the result of sudden atmospheric changes merely; or is caused by an influence as unknown an inexplicable as the potato malady, is at present, at least in some degree, involved in conjecture. That insects have produced it, and that frost often occasions it, cannot be doubted; but there may, nevertheless, be other influences quite as potent and extensive; and where all are more or less operating at once, satisfactory conclusions must necessarily be very difficult.

It has been suggested lately, that the disaster is produced by "a minute, venomous insect, the sting of which is poisonous to the juices of the pear." But as neither the insect nor the perforation of its sting, have ever been distinctly discovered, and as it is not known that insects attack vegetable growth merely for the purpose of stinging and poisoning, and without some specific object, as for food or depositing eggs, either of which would be soon discovered—we think this theory must for the present be regarded as too conjectural to be adopted.

Whatever may be the cause of this truly formidable evil, the best remedy, alike applicable to all cases, is instant excision of the affected parts. If an insect is within, burning the branches is essential. In the frost blight, cutting off some distance below the affected parts will, in most instances, prevent the poison from flowing downwards. It is true it often happens, where a tree is slightly affected, it recovers without any care; while again, when badly diseased, the whole tree may be cut away before the evil ends; but in by far the majority of instances, the remedy will be highly useful, and save the tree. It however often fails for want of constant and daily watching, and unremitting application.

The best modes of *prevention* will doubtless be more fully known when the causes are better understood; but the precautions noticed in a former part of this article, to produce a good, healthy, well ripened growth, will, in many cases, be advantageous.

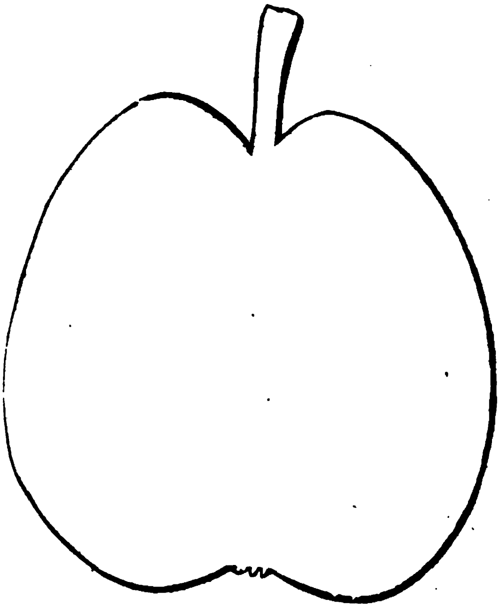
The *selection of varieties* least liable to disease, may also be a useful aid in prevention. From its uncertain nature, and its different effects in various localities, it is hard to point out those the least liable; but from a very limited opportunity for observation, it is believed that the *Seckel*, *Washington*, *Summer Francreal*, *Skinless*, and perhaps the *White* and *Gray Doyenné*, are very rarely affected; while the Madeleine, Bartlett, Genesee, St. Ghislain, Passe Colmar, Dearborn's Seedling, and many others, are frequent sufferers.

Pears and Cherries.

A deep interest is beginning to be felt in regard to the culture of fruit in the vicinity of Oswego, and I know of no business that pays the farmer better. In passing through several counties in this State, I have noticed that the choice kinds are very much neglected, especially the best kinds of the pear. Not one farmer in fifty has a tree, and where there are trees, they are generally of such fruit as is not worth cultivating. On conversing with intelligent farmers on the subject, and asking why they have no pear trees, the answer was that it takes them so long to come into bearing that it was hardly an object to set them out. This is the stumbling-block which should be removed out of the way. I acknowledge there are sorts which require ten to fifteen years to come into bearing, but there are other sorts that bear very young. I have a tree of the Bartlett variety, the trunk of which is only an inch and a half in diameter, that has borne three years, and was so heavily loaded in August, 1847, that it took four stakes to prevent the limbs from breaking. When people see these things they become convinced, and men from fifty to sixty years of age are willing to buy pear trees, and may reasonably expect to eat fruit from them.

As to the blight in pear trees, I have never lost but one tree by it, and that stood in wet ground. I have about four thousand trees from one foot to twenty feet in height, and not a twig nor a leaf has ever been blighted, not even on those that have made eight feet growth in a season. My soil is a rich loam, and my trees are very healthy. I give the soil a top-dressing of manure every year, and plant it with some hoed crop.

Cherries are as much neglected as pears; but I hope to see farmers soon set about raising the finest sorts, for there are now but few, comparatively, but the common red, which, when compared with the best kinds, is almost worthless. In my opinion an acre of land set to fine fruit would yield a greater profit than ten acres of grain. Fine cherries and fine pears will always find a ready sale and good price in our markets. SCHUYLER WORDEN. *Oswego.*



Oswego Beurre Pear.

This is a new pear, raised from seed by Mr. WALTER REED, of Oswego, N. Y., and brought into notice chiefly by Mr. J. W. P. ALLEN, of that place, who has left us some specimens of the variety, which we think fully deserving the high praise which has been bestowed upon it. It is a hardy and thrifty sort, and the tree bears early and abundant. Mr. DOWNING has described it in the *Horticulturist*, as combining "in a great degree the finer qualities of the White Doyenné and the Brown Beurre." Mr. D.'s description of its form and qualities, is as follows:—

"Fruit of medium size, form oval-obovate, regular. Skin smooth, yellowish-green, streaked and mottled with thin russet. Stalk short and stout, set in a bold and rather deep cavity. Calyx much like that of the White Doyenné, small, closed, set in a smooth, regular basin, which is only moderately depressed. The flesh is in consistency and taste between that of the White Doyenné and Brown Beurré, buttery, melting, juicy, with a brisk, rich, slightly sub-acid and excellent flavor. Core small. Seeds few."

Its season of ripening may be said to be November and first of December; but Mr. ALLEN thinks by attention to early and late picking and proper ripening, "it may be eaten in perfection from the middle of October to middle of January."

Fruit in Georgia and Mississippi.

M. W. Philips, of Mississippi, states in the *Southern Cultivator*, that he was formerly ridiculed for proposing the market culture of fruit; but in four years from that date, one man sold over $2,000 worth of fruit from a few acres—that he has himself sold peaches at 75 cents per dozen, and $11 worth from a tree four years of age. He says he can take ripe to market, by the first of July, peaches of the Early York, George IV, and Red Rareripe; and so on successively, by different varieties, to the middle of October.

Greene B. Haywood, of Casulon, Georgia, in the same paper, says that fine *pears* have been produced at Athens, in that State. The apples found best adapted to that climate, have mostly originated in that State; among the good winter apples, proved there, he describes the *Village Burr*, *Virginia Green*, (keeping till summer,) *Cheese Apple*, *Iron Black Apple*, and *Oconee Greening*. A variety called *June Apple*, ripening in July, contrary to the general characteristic, does not ripen earlier by being moved south. The trees must be allowed to branch low, as the hot sun has already injured such of his young trees on the trunk, as were trimmed high.

Another correspondent in central Georgia, says that the *pear*, but for the blight (which pervades the whole United States) flourishes better than the apple; that the quince thrives finely wherever planted; that plums, nectarines, and figs do well; but cherries, except the Morello, have not succeeded well. Northern winter apples ripen and drop during the latter part of summer, and do not succeed so well as native fruits.

CULTURE OF STRAWBERRIES.

I discover in the magazine of Mr. Hovey, for November, a laudatory notice of his Boston Pine, by Mr. Coit of Norwich, in which it is praised for its strong character as a bearer. In the backwoods, we should deem this a strange recommendation for a staminate, which we only use as an impregnator, and would prefer a plant making no runners, as one so vigorous would soon root all the pistillate plants out. From 1500 to 2000 plants, he raised near a bushel of fruit; a strong evidence of its being staminate, and as we find it not producing perfect fruit on one-tenth of the blossoms in an average of years.

From the same number of pistillates, properly impregnated and cultivated, we often raise from five to eight bushels. My neighbor Culbertson must do this, or he would not take 120 bushels to market in a day. It is strange that staminates should still have their advocates, as valuable for cultivation for their fruit. In some years some staminates bear five times as much as in others, where no increase is found in the pistillates, as every blossom will bear a perfect fruit if impregnated, and not killed by a late frost, or the plants too much crowded to admit of impregnation, which is often the case. Writers should not undertake to speak of the bearing of a plant. from the crop of a single year. Why is it that your nurserymen still advertise large fruited, perfect blossomed staminates, that bear a full crop of perfect fruit? Our nurserymen never do this, but to all pistillates add eight or ten staminates to the hundred, and in separate parcels. A HORTICULTURIST. *Newport, Ky., Nov. 24th*, 1847.

RAISING QUINCES.

A correspondent of the *Horticulturist*, who raises this fruit of extraordinary excellence, pursues the following course:—He selects good, deep, dry, rich soil; which is deepened by a thorough use of the subsoil plow, and manure applied copiously and deeply, by dropping it in the bottom of each furrow as the plowing proceeds. Large and deep holes are dug for the trees; each receives half a barrel of good compost; the branches are shortened one half, before setting; and the soil well settled among the roots by drenching with water, before the hole is quite filled. All fruit trees, by the way, should receive this good treatment. He does not lose one tree in a hundred, by this excellent practice.

The pruning is given in autumn, and consists of cutting out, as sparingly as possible, and only old, crooked, crowded, and decayed branches. Every autumn, manure is spread round each tree, and after a light plowing in spring, salt is spread broadcast at the rate of ten bushels per acre. The salt is regarded of very great consequence, but it must be applied in connexion with free manuring every year. The ground is kept mellow and clean by constant cultivation, potatoes, sugar beets, &c., being found well adapted to the purpose. The principal secret of success, it will thus be perceived, consists in cultivating and doing everything in the best manner; while others, who do not succeed, do not cultivate their trees at all.

The writer states that a good crop of quinces may be obtained three years after transplanting, and the trees will continue in a productive state thirty years.

Varieties of Fruit, and Soils of their Origin.

There are some varieties of fruit which appear to be equally good in all places, and in all kinds of soil. Others, in some localities are fine, and in others nearly worthless. It becomes an interesting subject of inquiry in such cases—What was the soil where such varieties originated, and are not similar soils best adapted to their perfection? Very little attention appears to have been given to this subject, and we are in possession of but few facts in proof.

We have noticed the present year that the Imperial Gage, which appears to have originated on the sandy soil of Long Island, has in all cases been fine when grown on sand or sandy loam; but on heavy clays it has been nearly worthless.* The same result has been observed in relation to the Bloodgood pear, which appears to have had a similar origin. On sandy loam it was excellent; on clay it was far inferior to the Skinless. The latter pear is invariably fine on heavy soils, but not always so on those of a lighter character—what was its origin? The White Imperial peach, which first grew on the clayey soils near Aurora, in Cayuga county, N. Y., proves to be on such soils of the highest quality; but, though always fine, it appears not always to sustain the full perfection of its character on sandy loam.

The subject appears to be worthy of further inquiry, and if the supposition is correct, lists of varieties, adapted to soils of different qualities, would be valuable to those planting orchards and gardens.

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* A friend informs us that the finest flavored Imperial Gage plums he ever tasted, grew at Troy, the soil sandy loam.

HINTS FOR THE SEASON.

Shelter for Stock.—In providing for domestic animals in winter, the first requisite is *shelter*. It is remarkable that under all climates the temperature of the animal system when in perfect health, is nearly the same—about 100 degrees. This temperature or vital heat, is supported by the decomposition of carbon, which is supplied to the system in the form of food. The greater the exposure to cold, the more rapid is the dissipation of heat from the surface of the body, and the greater must be the internal supply of fuel to keep up the proper temperature. If the amount of food is deficient, the deficiency is made up by a decomposition of the bodily tissues—the fat, flesh, &c.—and the animal grows poor. If the insufficiency of food and the exposure continue, the body becomes more and more emaciated from the loss of its carbon, till at last it is incapable of supplying the quantity needed to support the temperature, and death ensues. By protection from cold, the consumption of carbon is lessened, and hence "warmth is equivalent to food."

But there are other advantages of shelter. Long exposure to wet, though the degree of cold may not be great, is injurious to the health of animals. The continued saturation of the skin with water, prevents the natural exhalations, and tends to induce disease. The fleeces of sheep are known to be much deteriorated from this cause. But if it did not injure the health of the animals, its effects would be prejudicial to the interest of the farmer in another way. It prevents the animals from enjoying that quietude which is necessary to thrift. The connexion between the nervous and muscular system, is such that whatever disturbs the *former*, sensibly affects the latter; so that the animal may actually grow poor from no other cause than simply being rendered *uncomfortable*. For these reasons shelter—at least protection from storms—is as useful where the cold is not so intense as to freeze the ground to a great degree, as it is in a more northern climate. The dampness and mud in the one case, are as injurious as the greater cold but drier atmosphere of the other.

Feeding Srock.—A man who was noted for the excellence of his working-oxen, once observed to the writer, that he could seldom hire a man who was "fit to drive a yoke of good oxen to water." We think it is quite as difficult to find a man who is capable of *feeding* cattle or other stock in a proper manner. There is generally a great deal of unnecessary waste. Some men will carry stock through the winter with half the quantity of hay or fodder that others will use, and yet the stock which has consumed least will come out in the best order. To feed economically, the animal should have just the quantity he requires, and no more—none should be given to be trampled under foot and left, unless it is intended for manure, without being first eaten. It is best, generally, to feed under cover, in clean mangers; though in dry weather coarse fodder, or that of inferior quality, may be fed in mangers in the barn-yard, or on dry hard ground, or clean, hard snow. Coarse hay, clover and timothy, (herds-grass,) and corn-stalks had better be passed through a cutting machine, and if some bran, shorts, or a little meal can be added, the improved quality of the whole will render it much better relished by the animals, and they will, in their increased flesh or milk, repay the cost.

A good food for work-horses or oxen is cut hay, with from three to six quats of corn-meal per day—regulating the quantity according to the degree of labor to be performed. Oats and corn ground together make a good provender. Moisten the hay, and mix the meal with it it. If the labor is not severe, two quarts of meal with the hay, and the addition of a peck of carrots per day, will keep the horse in good condition. The carrots are good for the blood, and will improve the horse's health. Carrots are also valuable for milch cows—increasing the quantity and improving the quality of the milk.

Rowen hay, or after-math, is most suitable for calves and milch cows, or sheep. It is almost like grass, and will produce nearly as much milk. It is likewise good for fattening animals; but for working-oxen and horses it produces rather too loose a state of the bowels to admit of the muscular exertion which is required.

Young cattle and sheep will be benefitted by a daily allowance of some kind of roots—potatoes, carrots or turneps. The succulence of the vegetables will render their dry food more like grass—the most natural and proper food for such stock. January and February are the best months for disposing of the poorest fodder. While the weather is coldest, the appetite is sharpest, and articles will be eaten which under other circumstances would be rejected.

"**Breaking Roads" in Snow**, is a business which the farmers of the northern section of the country are frequently obliged to perform. Were it not that this work is generally performed as a frolic, in which the whole neighborhood engage, it would be regarded as very laborious and a great burden. Formerly it was the practice to shovel a track through the deep drifts, and the travelled road was sometimes several feet lower than the snow on each side. But the objection to this was that the first snow storm or high wind filled up the road and rendered it impassable till it was again dug out. The best course is found to be to avoid digging down as much as possible. Some narrow and deep drifts must be dug through to keep the road level, but the principal track is made by *pressing down* the snow. A couple of heavy timbers—round logs are best—are fastened together and held by a cross-bar so as to represent the form of an A. They should be twelve to fifteen feet long each, and be spread at one end to the width of ten feet. A plank may be fastened, edgewise, along the top of each log, which will prevent the snow from falling over and filling the track as the timbers are dragged along. The concentrated strength of all the oxen and steers that can be brought together is to be applied to these timbers, which are to be drawn over the snow to form a road. Oxen are better than horses for this purpose, and will work through deep snow where horses would stick fast. Rather light cattle, if handy, should be put forward, and the snow should not be shovelled except in narrow drifts, as before mentioned. Twice passing with the timbers will make a smooth, hard road. It is customary, in passing the second time, to lay additional weight on the timbers, in order to compress the snow as much as possible. The advantage of this plan is, that by pressing down the snow, instead of digging it out, the travelled part of the road remains so full that the snow does not drift on it—in fact it is sometimes higher than the general surface, because the snow is so hard in the road that it is not blown away, while that which has not been trodden is frequently taken off by wind. It is sometimes difficult to break through a deep snow, and it is best for men to walk along in front of the team, and prepare the way by making their tracks in the right places, levelling the deepest drifts, &c. After a good road has once been made, it is but little trouble to keep it so for the remainder of the season, or till the snow goes off.

MEMOIR OF JUDGE BUEL.

Among many distinguished individuals who may have justly earned the title of benefactors of our country, the memory of none is cherished with more lively respect and gratitude, by the Agricultural community, than that of Jesse Buel; and though the history of his career may not be new to some of our readers, we are convinced that the deep interest which is felt in one whose life was in so great a degree devoted to the public good, will be regarded as a sufficient reason for presenting the following brief memoir, which we have illustrated with a portrait of the Judge, and a view of the monument erected to his memory, by his family, in the cemetery of the Middle Dutch Reformed Church.[*]

Judge Buel was one of the noblest specimens of self-made men. Destitute of even the advantages now afforded by our common schools, he became, by his own unassisted efforts in the attainment of knowledge, one of our most eminent, useful, and honored citizens. Born at Coventry, Conn., on the 4th of January, 1778, he removed, at the age of twelve years, with his parents, to Rutland, Vt., where, at the age of fourteen, he was apprenticed to the printing business. After devoting himself with great assiduity to his trade for four years, he succeeded in buying the remaining three years of his time, and went to New-York, where he commenced work as a journeyman printer. He subsequently worked in this city, and was for a short time at Lansingburgh and Waterford. When in his 20th year, he, in connection with Mr. Moffat of Troy, established the "Troy Budget," one of the few papers of that day which has been continued to the present time. In Sept., 1801, he removed to Poughkeepsie, where he and Mr. Joiner, commenced a weekly paper called "The Guardian." This paper was continued but a year, when he formed another co-partnership, and commenced another weekly paper called the "Political Banner." This proved an unfortunate concern; and in about a year, through the mismanagement or dishonesty of others, involved him in total bankruptcy. Nothing discouraged by his misfortune, he pressed onward, and as early as 1803, we find him once more located, and establishing another journal. This was "The Plebian," at Kingston, Ulster county. Here he resided for ten years, and by his industry and frugality, succeeded in retrieving his losses, and acquiring considerable property. During his residence at Kingston he held, for several years, the office of Judge in the Ulster county court. In 1813, having become favorably known as an editor, he was induced, through the influence of Judge Spencer, to remove to Albany. Here he established the "Albany Argus," and the next year, 1814, was appointed State printer, which office he held till 1820, when he sold out the Argus, and retired from the printing business. Through all this period, his industry, application and study, were unremitting. "It is worthy of remark," says Prof. Dean, "that while engaged in this business, he always performed, himself, the labor essential to its successful prosecution. He was always the setter of his own types, and until he came to Albany, the worker of his own press."

But it was as an agriculturist, and by his efforts to improve the condition of the agricultural interest of the country, that Judge Buel became pre-eminently useful. He very early in life manifested a deep interest in rural pursuits, and while editor of the Plebian at Kingston, and of the Argus at Albany, frequently devoted a column or two of those papers to agricultural and horticultural affairs; and on his retirement from the latter paper in 1820, he determined to devote himself to those pursuits. That he might the better ex-

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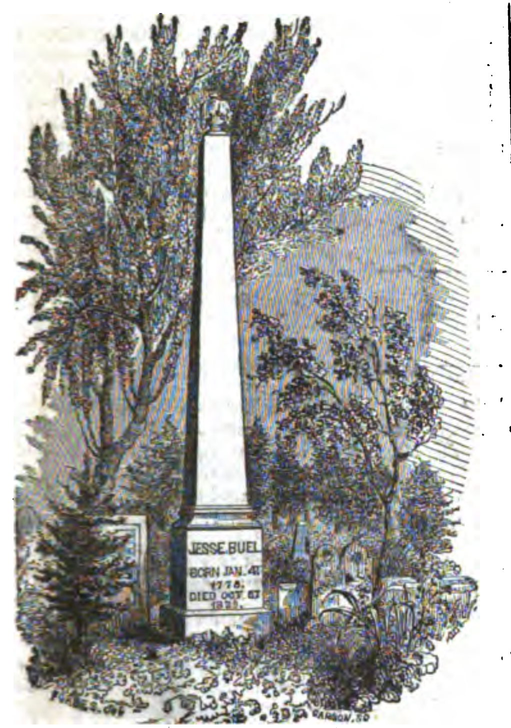
[*] The New-York State Ag. Society, proposed to the family of Judge Buel, last year, to purchase a lot in the new cemetry on the Troy road, and to remove the remains and the monument, to that beautiful burial place; but the proposition was declined, they preferring to have them remain in the family cemetery.



hibit the effects of intelligence in the improvement of the soil, he purchased, in the vicinity of this city, a most forbidding tract of land, from which to make a farm. It was a part of what was known as the "sandy barrens," lying between Albany and Schenectady, and has been described as "an open common, covered with bushes; and appearing as if doomed to everlasting sterility."

Judge **Buel**, however, being satisfied that this unpromising soil was capable of being rendered productive and profitable, immediately proceeded, with the intelligence and judgment which he brought to bear on all his pursuits, to improve it by fencing, clearing off the brush, draining, manuring, &c. He erected buildings, and established his residence here. In the course of a few years, the place, from having been positively repulsive, from its barrenness, became noted for its general fertility, and especially for its very fine orchard of various fruits, and an extensive and well managed nursery. While engaged in these improvements, he devoted his leisure hours to the advancement of his favorite pursuit. He officiated for two years as Secretary of the old Board of Agriculture, and the last two volumes of its "Memoirs" were prepared by him. He also republished from the columns of the Argus, a Treatise on Agriculture, which had been written at his request, for that paper, while edited by him, by his friend Gen. **Armstrong** of Dutchess. As another means of advancing the improvement of his favorite pursuit, he issued a number of Agricultural Tracts. He was also a frequent contributor to the old "American Farmer," the "New England Farmer," and the "New-York Farmer," the only agricultural papers published in this country previous to 1830. On the establishment of the old "Genesee Farmer," by the present proprietor of "The Cultivator," Judge B. became one of its warmest friends, and for nearly two years, previous to the establishment of "The Cultivator," was a weekly contributor to the editorial department of that paper. These papers, however, at that day, had but a limited circulation; and he wished to adopt some mode by which the benefits they afforded might be enjoyed by a much larger number of our farmers. After consultation with the few who then took an interest in the subject, the plan of "The Cultivator" was determined upon—a plan which has resulted in immeasurable good to the country.

"**The Cultivator**," as many of our readers are aware, was commenced under the auspices of the New-York State Agricultural Society, at the low price of 25 cents per year, Judge **Buel** having volunteered to edit it without charge for his services, and the late Patroon, the Hon. **Stephen Van Rensselaer**, and the late **James Wadsworth**, Esq., of Geneseo, having pledged themselves to pay whatever expenses might be incurred in the publication, over its receipts, for one year; for no one anticipated that the sales of the paper would pay the expense of the publication. But so nearly were the accounts balanced at the end of the year, that Judge **Buel**, at the request of the Society, paid the bills and took the establishment into his own hands, and gradually enlarged the paper, and increased its price to $1 a year. He continued to conduct it, with increasing usefulness to the public and honor to himself, till his death, which occurred suddenly on the 6th of October, 1839, at Danbury, Conn., while on his way to New Haven, to deliver an Address before the Agricultural Society of that county.

In addition to the works already enumerated, Judge **Buel** was the author of the Farmer's Companion, a work written at the request of the Massachusetts Board of Education for the District School Libraries of that State, and the Farmer's Instructor, 2 vols., prepared for Messrs. Harper's series of books for the District School Libraries of this State. The productions of his pen secured him a wide reputation at home and abroad, and he was elected an honorary member of many distinguished societies in this country and Europe.

Judge **Buel** adopted as a motto for "The Cultivator"—"To improve the Soil and the Mind;" and while he was indefatigable in his exertions to carry out the first object suggested, he never for a moment lost sight of the latter. He was an earnest advocate for self-instruction, a noble example of which was presented in his own attainments. In obtaining the large fund of knowledge which he possessed, he was not even aided by the advantages of a common school education, having never attended school but six months. His views in regard to the improvement of "the mind," through the medium of publications, are expressed in the following extract from the first number of "The Cultivator:"

"To **Young Men** we would especially appeal. You are destined soon to occupy the stage of public action, and to fill the important stations in society. *Now* is the time to *prepare* for these high duties, as well as for profit and distinction in your business. Your characters are but partially formed, and are yet susceptible of receiving good or bad impressions, which are to last through life. It is important to you, to your friends, and to society, that these impressions should be for good. We will lay before you rules and examples of the wisest and best men, to aid you in the formation of your characters—to enable you to become intelligent and successful in your business,—useful and respectable in society,—and beloved and happy in your families. Do not object that you have no *time* to read. Few young men labor more hours than did Benjamin Franklin, or are more humble and self-dependent than he was in his youth; and yet Franklin found abundant time for self-instruction; and so indefatigable and successful was he in his studies, that he became one of the most useful and celebrated men of his age. We need not limit the remark to Franklin: most of the distinguished men of the day have risen from humble stations by their own industry and frugality, and have acquired a great share of their knowledge in the hours not allotted to ordinary business. Your winter evenings are your own, and may be applied usefully. They may be computed at one-fourth of the day, or one entire month in a year. Time is money: and the young man who appropriates this month to the acquiring useful knowledge, does more to add to his future fortune, to say nothing of his intellectual wealth, than if he received pay for this month, and loaned it upon interest. Knowledge is in another respect like money: the greater the stock of it on hand, the more it will administer to the respectability and enjoyments of life. But knowledge is not to be acquired without exertion, nor is anything else that is useful in life. It is the labor we bestow in acquiring an object that imparts to it an intrinsic value. It has been well said, that 'although we may be learned by the help of others, we can never be wise but by our own wisdom.' It is the humble design of this monthly sheet to excite a laudable ambition to improve the mind as well as the soil."

THE FARMER'S NOTE BOOK.

Transplanting Large Trees.

In the spring of 1846, I determined on the removal of an elm tree that flourished in open grounds on rather wet soil of muck and clay. I chose a tree standing in this situation, believing there would be no tap roots to hinder raising it to the best advantage, and knowing by experience that the removal of the great majority of the different kinds of trees from low wet lands to those high and dry, does not retard the growth provided proper caution is used in transplanting.

A tree that is to stand out exposed to the winds and sun, like an elm, should be selected in the fields, where it has formed a natural low top and stout trunk, and where a vigorous growth of roots is attached, especially if the tree be large, as this was—one foot in diameter at the butt, and about twenty-five feet in height.

A trench was dug about three feet deep around the tree, three feet from the body, cutting off all the roots that reached the ditch, leaving a spot of earth for the tree to stand upon of seven feet in diameter. The soil was all returned to remain through the season, that new and vigorous roots should spring forth in abundance to supply the wants of the tree. Last spring, in throwing out the earth again carefully, we found that new roots had appeared in all directions. After excavating well under the tree, it was easily upset by the aid of oxen and chains, attached to a limb that we designed to amputate, and cared not if the bark was marred a little. The earth was removed from the under side by bars and picks, which reduced the weight, as we judged, to about two tons; the diameter of the mass was seven feet, and over twenty inches in thickness. After rolling it on to the centre of an ox sled, the limbs extending backwards, with a stone-boat well secured under that part of the top which was most exposed, it was removed to a loamy soil on the church common, where a solid rock underneath laid within twenty inches of the surface. The tree was very easily uprighted, the top being much the lightest; a small portion of the ends of some of the limbs were cut off, and a few removed entire. We were careful to crowd earth and small stones under the roots into every unoccupied spot. The tree was not set so low by about eight inches as in its natural state, but after spreading around the tree the loose soil, and then about two tons of stones, it was able to take care of itself, as it proved to have received but little check, though the summer was dry and hot.

The advantage of placing stones upon the roots, is to hold them firmly down, that they may not be acted upon by winds. These, with a load of chip manure, which was cast upon the stones, kept the earth moist and cool. The roots of the elm extend to a greater distance than those of most of our forest trees. In transplanting they are generally not well preserved, which is the reason of so many failures with this, the most beautiful of all the trees of America. By clipping off a portion of the roots in the spring, previous to moving, as in this case, the life of the tree is insured, and it is given one or two years' start in growth. S. W. JEWETT. *Weybridge, Vt., Dec.* 1, 1847.

Fall Plowing.

November is the best time for plowing lands that are to be planted the next spring. I am aware that I am on the borders of controversy in making this statement; but it seems to me that the following advantages arise from the practice—

1st. At this season the team is stronger, and the weather more favorable for breaking up grass land, than in the spring.

2d. As the spring of the year is the most hurrying season to the farmer, it is a great help to him to have the plowing done the fall previous.

3d. In turning the land over so late in the season, nothing green starts up, and the frosts of winter immediately following, the grass roots are *killed*—the surface also, exposed to the action of the frost, is mellowed, and in the spring the land will be divested of every living thing, and crumble down before the harrow as fine as a garden bed. The labor in planting and weeding the corn and potatoes is considerably lessened by this means.

4th. The winter arrangements of the worms are entirely reversed. I speak particularly of the cut-worm, my land not being infested with the wire-room.

Fall plowing on my land is a complete remedy for the ravages of the cut-worm. Contrary to usual practice, a small field, about one and a half acres, was broken up last May and planted to corn. In planting, I noticed that there were great numbers of small cut-worms in the land, and took the hint at once that there would be trouble in due time. By the time the corn was up, the worms were ready for operations, and although we went over the field three different times, destroying all that could be found, they still got the mastery, and at weeding time not one hill in two hundred was left standing. The field was replanted to the small, early Canada corn on the 15th of June, being careful in planting to kill all the worms that could be found. Two days after this, two men destroyed between 5 and 600 of these worms in an afternoon on the same field. The cut-worm does not usually work in corn-hills after the 20th to 25th of June, and as the second planting did not come up till after the 20th, it stood well. Twice as many hills were planted in the rows as were planted originally of the larger corn, and I harvested this fall over 80 two-bushel baskets of ears of ripe, sound corn from the field. The crop was rather too expensive; but as the land was very well fitted in the way of manure, I was determined not to be beaten by the worms if hard fighting would do any good. The remainder of the field, left in grass, seemed to be full of these worms, as I ascertained by striking in the hoe in a number of places; and I supposed at the time that the crop of grass would be materially injured by them. On the contrary I could not discover that it was, the swaths being stout and heavy at mowing time.

I have taken the precaution to plow the remainder of this field *nine inches deep* this present month, and fully expect by this means to save myself from a like mishap next spring. F. Holbrook. *Brattleboro, Vt., Nov.* 15, 1847.

Culture of Madder.

Having heretofore presented to the public, the way to plant and cultivate madder, I have thought best to give, as near as I could ascertain, the expense of raising and fitting for market one acre of madder:—

Cost of the seed, which is the upper part of the root, would be,	$15 00
Plowing and planting,....................................	5 00
Tilling each season, $5 for each season,...................	15 00
Digging one acre,..	20 00
Washing, drying, and grinding,...........................	25 00
Interest on the land, $7 per year, four years,..............	28 00

An acre of Madder, planted in the old way, would yield at four years' old, from four to five thousand lbs. of merchantable madder, which, at $16 per hundred, would amount to from six to eight hundred dollars.

I have one acre planted on raised hills, as recommended in the February number of the Cultivator, 800 hills to the acre. I dug one hill of the piece this fall, an average hill, which had been planted 17 months or *two seasons;* the roots obtained from this hill, after having been washed clean, and the water dried off, weighed 17 lbs., which, allowing 5 lbs. of green roots to make 1 lb. of ground madder, the above would, if dug this fall, yield 2,720 lbs. of ground madder, which, at $16 per cwt., would bring $435.20. Madder planted the old way generally gains 100 per cent. the third season, which, if the above-named acre should do, it would next fall yield 5,440 lbs. of ground madder. The fourth season it has generally gained 60 per cent. when planted the old way.

I am much pleased with the new method of planting with raised hills. I have no doubt but more madder can be raised by this method of planting in three years, than by the old method in four, from the same ground.

If any gentlemen interested in the madder business (should doubt my statements, or would like to obtain information respecting the business,) will call on me, I will satisfy them of their correctness, and give them any information necessary for the cultivation and preparation of madder for market.

You may expect to hear from me once a year about the madder business, if my hand is able to write. James Eaton. *West Winfield, Herk. Co., Y. Y., Oct.*13, 1847.

Making Shingles by Machinery.

A correspondent with the signature of "Reader," writes us from Kent, Conn., in regard to a process of making shingles by machinery. He states that by the mode which he describes, timber which was formerly thrown away as too winding for making shingles by the old process of riving, can be worked up almost as well as straight-grained timber. The first thing is to construct a vat for the purpose of boiling or steaming the blocks, which are previously sawed the length required for the shingles, and quartered. "Let the blocks be thoroughly steamed or boiled through by means of flues which should be placed in position to heat the water in the quickest manner." The apparatus for cutting is described as follows:

"The machine for cutting is of simple structure, easy to be kept in repair, and requires but a moderate horse or water power to work it. It consists of a gate of cast iron weighing about 100 lbs., to which two knives are attached in such a manner that two shingles are produced by each descending motion of the gate, which slides in vertical grooves. Each shingle is produced in as perfect a form as can be made, being jointed at the same time they are cut, and the edges made parallel. No inconvenience arises in laying the shingles on a roof—they do not *run*, as it is called, and they are free from *shakes and splits*. The smoothness of surface is another item which makes them superior to *sawed* shingles for carrying off water. The process of steaming improves the texture of the timber, and when the shingles become dry, the wood is more compact than if seasoned in the ordinary way. In the old method, one-half at least, of a good shingle tree was thrown away as useless, or only to be used as firewood; by the improved process, double the amount of shingles are produced, and at a great saving of expense. The expense of the machine is about $50."

We understand that further particulars can be learned by application to Eben S. Peters, Kent, Litchfield county, Connecticut.

Sheep—Weight of Fleece at Different Ages.

Will some one give information as to the usual difference in weight between the fleeces of old and young sheep. I have kept an account of the weight of the fleece of one Merino ewe, for seven years. The result is as follows: At one year old, she gave 4 lbs. 8 oz.; at two years old, 4 lbs. 13 oz.; at three years, 5 lbs.; at four years, 4 lbs. 12 oz.; at five years, 4 lbs. 6 oz.; at six years, 3 lbs. 13 oz.; and at 7 years, 3 lbs. 3 oz. The average result from a number of sheep might be quite different. But should it be similar to the above, it would seem unprofitable to keep sheep longer than until four or five years old, except perhaps individuals of superior excellence, as the wool degenerates in quality as well as quantity. H. C. B. *Otsego Co.*, 1847.

Construction of Ice Houses.

Having in the course of thirty years had more or less acquaintance with ice-houses, I propose to make some remarks, through the medium of the Cultivator, in regard to their construction. I am led to do so at this time by an article with plans, &c., in your November number.

I have known many plans for ice-houses, varying in expense from a sum that would build a comfortable farm-cottage down to, and seldom less than fifty dollars. When my father removed to this country, about forty years ago, he found an ice house upon the place. It was built, or rather dug out of a side-hill. It was a hole eight feet square and sixteen feet deep, in gravel and sand. The sides were planked up and kept in their places by three cross-planks or batteries, one at bottom, another at top, and one half-way between the others. These cross-planks kept the sides from falling in. The roof was formed of joist, setting on two sides of the pit, at the surface of the ground, and meeting at the top. These were roughly cross boarded, and over all was a thick covering of thatch. The gables were boarded up with about as much care as is taken in boarding ordinary barns, leaving a hole five or six inches in diameter in each end. When this place was to be filled with ice, a thick bed of clean straw was laid over the bottom, and bunches of straw were opened and placed around against the sides. As the ice was thrown in, it was broken into small pieces with a large mallet, and as the hole was filled the lining of straw was carried up to the top. The ice was heaped up as high as it would lie in the middle, and during cold weather it was left exposed, and quantities of pure spring water repeatedly thrown upon it, that it might become as far as possible one mass. As soon as the weather began to moderate, the whole was covered with straw, the door was closed and locked, and the ice left till wanted.

This ice-house was surrounded by trees, but after a few years they were removed because the shade occasioned dampness. We used a great deal of ice—indeed we never thought of economizing it—but I never saw it fail. The house was much larger than is necessary, and being near a large city, where timber was scarce and dear, it was much more expensive than is generally needful, yet it cost much less than most I have seen since. I am now convinced that this is the true plan of a cheap ice-house, and every farmer can make one for himself—of logs, slabs, and straw—the only article to be purchased being one pound eightpenny nails.

Ice-houses above ground are well enough for ice-companies, where large buildings are wanted to contain large masses of ice. The greater the mass, the less in proportion is the surface exposed. But ice-houses above-ground will never answer for *small* concerns, and they are quite too expensive if they would.

Within a few years I wanted an ice-house on my farm; and as I am so unfortunate as not to be able to live on the farm, and can only visit it a short time once a year, I have to entrust operations of this kind to others. Various schemes were tried; first, it was resolved that the building should be *here*, because convenient to the house; next, that it should be *there*, because out of sight; but in digging down they came to a rock, and then thought it was deep enough. My attention was attracted by a neat, small, stable-looking frame structure, the outside painted. On opening it, I found it double-sided and filled between with cut straw, well packed in; it had double doors, and a loft to stow away empty casks, and to deposite tools when not in use, &c. I was told that this was the new ice-house, and that it had been well filled. Perhaps it was not properly constructed; but whether so or not, or whether it had ever been *well* filled, *there was no ice there on one of the last days of July*.

I now took the matter in hand myself, and directed that my orders be implicitly followed. I selected the site—a fine sandy and gravelly side-hill, close by a pure and beautiful stream. The size of the ice-house being about six feet square by ten feet deep on the lower side—the materials common logs, notched together at the corners—holes as above for free circulation of air in summer, and no shade over the thatch—the cost limited to ten dollars. But the work did not cost near that sum, and the blocks of ice were dragged over the snow from the river to the house door without ox or horse or cart. The next summer I never wanted ice, and I found the only mistake was, putting the magazine so convenient to my neighbors that it was no fault of theirs that I had it.

The experience of a near relation is just the same. He placed his ice-house on a knoll in the middle of a pasture lot, far from any shade. It is larger than mine, and he painted the sides above ground, and roofed it with shingles; thus making it more expensive, but not better, if as good as mine, and certainly no more durable. His family is literally prodigal of ice—a wheelbarrow full at least being brought to the house every day, and plenty given to every one that asketh it.

Ice is one of the best medicines in cases of fever, and no family should be without the means of procuring it in case of need. I have known instances of cures by the judicious use of ice in desperate cases, and iced drinks and ice kept in the mouth when permitted by the physician, are great comforts and alleviations at least. C. C.

N. B.—Always keep the ice well covered over with clean straw.

Western Wool.

There are some very fine flocks of sheep at the West, especially in Washington county, Pennsylvania, and Ohio and Brooke counties, Virginia, and several counties in Ohio. There is a peculiar softness and felting property in the fibre—and the best wool of the West is sought after with great avidity by the manufacturers. It not only readily sells, but also for fair, remunerating prices. The sheep from which the best wool is taken are small, and generally show rather feeble carcase and constitutions. The breeders of fine sheep at the west seem to have committed the same error with the breeders of the early Saxons—gone for fineness, regardless of size of carcass and strength of constitution. This error can be retrieved and must be, or the fine flocks of the west will be lost to the country. This must be done by crossing with the larger, stronger constitutioned, and almost equally fine rams of the *best* flocks of the East. The finest of the Rambouillets—and some of the choicest and heavy shearing rams of the Eastern Saxons would be admirable crosses with the fine wooled sheep of the best flocks of the West. The time is at hand when the opportunity of making such improvement will be given to the West. A large and splendid flock is now being concentrated near Vanceburgh, Kentucky, on the fine land for sheep husbandry of that portion of the State. I understand, also, that a gentleman in Wheeling is about to establish a flock of sheep, gathered from the East, in his neighborhood. B.

The Last Wheat Crop in Michigan.

Our crops here have been good this season, and prices fair. My son's wheat last year averaged thirty-four and a half bushels to the acre. This year his and mine together averaged thirty bushels and one pound to the acre, notwithstanding the unusual severity of the winter. This quantity is rather above the average of the farmers generally in this vicinity. Much depends on the manner of getting in—the time—the kind of wheat, and quantity put on the acre. We use a trifle more than one and a half bushels, and think we shall increase it to one and three-fourths to the acre. Our time is from the 8th to the 20th of September, and we use the *Soule's* wheat only, having carefully noticed, since its introduction here, that it has stood the rust and winter better than any other variety. AUG. FINNEY. *Hudson, Lenawee Co.,Mich., Nov.,* 1847.

Vineyards of France.

MESSRS. EDITOR—Your correspondent, Ik. Marvel, gives us some marvellous information, when he informs us that in the best vineyards of France, "but little attention is paid to the variety of grape cultivated, as the quality of the wine depends less on the kind of grape, than the exposure." Such is not the fact. The quality of the wine depends more on the skill and care in manufacture, than soil or exposure. Many vineyards lose their reputation by a change of owners, and others whose wines for years had no reputation, and were disposed of at the lowest price, have in a few years attained the first rank. Some of the best vineyards in France are fully exposed to the North. With us, each variety of grape, be its location and exposure what it may, produces a wine readily distinguished from all others. In some seasons, a northern exposure ripens the fruit better than a southern one. The aroma and flavor of the Catawba is the same in every soil and exposure, and the quality chiefly depends on the manufacturer. The pure juice, without sugar, spirit, or other addition, yields the best wine. The manufacture of butter is plain and simple, yet not one housewife in twenty makes it of the first quality. The same is true of the manufacture of wine. A VINE DRESSER. *Cincinnati, O., Nov.* 12, 1847.

Large Crops.

In a late excursion at the West, I noticed from time to time, short paragraph accounts of large crops of corn, and other products, in the valley of the Ohio.

For example:—In the notice of the annual fair of the Washington Co. (Ohio) Agricultural Society, J. W. Dana, Esq., of that county, is said to have raised a crop of corn, amounting to about 145 bushels to the acre—and in Butler county a gentleman is said to have raised 175 bushels of corn to the acre.

Will Mr. Dana, with whose farm we are somewhat acquainted, give us, and the public, through the columns of the Cultivator, published at Albany, a brief and luminous account of his method of preparing and tilling the grounds on which he raised this crop? Corn being a great staple production over the country, and especially over the Ohio valley, Mr. Dana will be rendering a special service to the cause of agriculture, by giving us his method of cultivation.

I would also respectfully ask other growers of large corn crops in the west, to communicate also with this paper—inasmuch as the Cultivator has a wide circulation over the country. B.

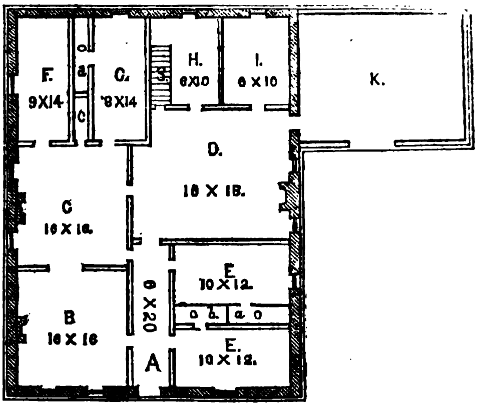
[We know Mr. DANA and his farm, and should feel greatly obliged if he would comply with the suggestions of our correspondent in relation to his corn crop.

Improvement in the Preparation of Paints.

The perishable nature of paints, and their failure to afford protection to buildings but for a short time, has latterly been a subject of much complaint. Mr. RICHARD DALLY, claims to have discovered a remedy for this difficulty. He states that one cause of the failure, is the adulteration of white lead and colored paints, by the sulphate of barytes. Pure white lead, however, he states, though "admirable for every purpose of interior decoration and ornament," is unfitted to stand exposure to the weather, and when thus exposed, rubs off like whitewash. Mr. D. says—"At the suggestion of an aged and experienced painter, Mr. Henry Roome, the subscriber was induced to make an experiment twenty years since, and from its remarkable preservation, in comparison with painting as generally performed, (the principles having been corroborated by recent discoveries in chemical science,) he can promise a degree of durability to all paints exposed to the weather, that shall place the art of house-painting in a much more favorable light than ever before—for singular as it may seem, most of the operations of the painter have hitherto been the result of accident, and not of any fixed principles."

He also states that by the application of his discovery, black, yellow-ochre, Venetian-red, and Spanish-brown, will be rendered nearly indestructible, "and will continue for a generation unaffected by atmospheric action, thereby furnishing ample protection from the weather for expensive steeples, rail-road and other bridges, roofs, fences, &c."

We are informed that paints and oil, prepared by Mr. DALLY's mode, are for sale at the corner of Burling slip and Pearl-st., New-York.



Plan of a Farm-House.

MESSRS. EDITORS—I send you another ground plan of a cottage, in which I think three things, very desirable for farmers in ordinary circumstances, are attained, viz., sufficient room, convenience, and cheapness. The size is 46 by 34 feet. *A.* represents the front hall, 6 by 20 feet; *B.* the parlor, 16 by 16; *C.* the family room, 16 by 16; *D.* the kitchen, 16 by 18; *E. E.* two bed-rooms, 12 by 10 each, including the clothes presses *o. o.*; *F.* the family bed-room, 14 by 9; G. the young children's bed-room, 14 by 8;—young children should always sleep near their parents, on account of sickness and sudden calls in the night;—*H.* store-room 10 by 6; *I.* pantry or milk-room, 10 by 7; *K.* wood-house; *c.* china closet for the family room; *o.o.*, clothes presses; *S.* chamber stairs. In the above plan there are no unnecessary doors, and every room is convenient for the business to which it is appropriated. The two bed-rooms opening from the family room may be sufficiently warmed in winter by opening the doors a short time, and the good housewife can oversee the affairs of her family and kitchen without taking many unnecessary steps. The kitchen is near to the front door, the family room, the store room, pantry, and wood-house; and as to fire-places or stoves, these must be left to every one's wishes. I have designated a place for stairs, thinking it would be well to have at least a floor laid over the chamber, for such places are always applied to some use. Occasionally and for temporary purposes, if more room be wanted, a bed may be put into the parlor.

The Cost.—Such a cottage as the above, built of brick and completely finished, with a cellar under the whole—the walls to be 8 inches thick and 12 feet high, and ten feet between joints—can be built in Buffalo for $800. H. A. P.

The Wood Plow.

I was intimately acquainted with JETHRO WOOD for nearly thirty years, residing within five miles of him during the whole period in which he was engaged in improving the plow. In the early part of 1812, I tried to procure one of Peacock's, near Philadelphia, but failed; and on my return, I spoke of my disappointment to him, when a long conversation on improvements in the plow ensued. From that time the subject continued to claim his attention. In 1814 he obtained his first patent, the specifications for which I drew. The chief improvements (if my memory is correct,) consisted in the superior *shape* of the cast-iron mouldboard, and a *small wrought share*, fastened on with screws. I had one of the first that was made, *probably* before it was patented.

To understand the importance of these improvements and of those which followed, it may be necessary to learn how farmers had to manage in early times; and for this purpose I give an extract from The Plough Boy of 1821, vol. 3, page 5, with some *verbal* alterations:

"Ten years ago, the farmers of this town were satisfied with the Bull plow. They thought it superior to every other among roots and stumps. It was easily drawn back when it got fast, for it generally had no coulter; the share but little slant, and a short nose.

"Hard gravelly ground however, soon dulls a plow share. Many of us had to go far to a blacksmith's. While we were gone, the team was idle at home. When we arrived the shop floor would be partly covered with plow shares, but *first come, first served*, was the rule. From one-fourth to half a day was often lost in this way. But this was not all our trouble. The share sometimes came back in a different shape—it no longer ran like the same plow. It often had too much or too little *pitch*, and the share warped in hardening. A load of dirt fastened on it," &c.

Such was the state of things when Jethro Wood introduced his plow. Its *permanent shape*, and *cast-iron edge*, wrought a total change in our condition, but not without great opposition for a time. He told me that all his friends, (with one or two exceptions,) endeavored to discourage him from trying "pot-metal!" and the same opinions were prevalent when he proposed to dispense with the old sheath or standard, and substitute a projection from the upper edge of the mould-board, to pass through the beam. His language to me at that time was, "I intend to make it as simple as a skimming dish." For this improvement alone, (whether it pass through or be fastened under the beam) his name should be immortalized, and no candid person can deny him extraordinary merit, when he considers that every plow, down to that time, had been encumbered with a heavy sheath of wood or wrought iron—expensive, and liable to get out of order.

In his first patented plow, nearly a dozen screws were employed; but in that of 1819, not a screw was seen; and the plowman was rendered independent of the blacksmith—avoiding long bills and great loss of time.

The exercise of mind, and amount of labor to perfect these improvements, can scarcely be appreciated by those who have not been engaged in similar pursuits. It was a new field, and everything had to be learned by experiment. To discover and procure the best materials for patterns, as well as to prepare them, employed him for a long time; and most men would have shrunk from the difficulties that met him at the founderies. Often he had to overcome the awkwardness or unwillingness of the moulders by presents, or by showing them how to succeed with his own hands.

I am satisfied that all his patented improvements were inventions of his own—originating in his own mind; and to avoid encroaching on what others had invented, he had every volume within his reach that treated of plows, (including several Encyclopedias,) carefully examined for that purpose.

To Jethro Wood's name belongs the honor of rendering the plow that *cheap* and *efficient* instrument that we now find it—enabling us to cultivate our fields at less than a quarter of the former expense, and saving millions to the country. David Thomas. *Greatfield, Cayuga Co., 12 mo. 10, 1847.*

House-Feeding Sheep.

Richard Simeon, Isle of Wight, England, has very successfully practiced stall-feeding sheep for several years, one house containing 140 stalls, the other 150.

The stalls should accord with the size of the sheep, it being essential that they should not be so large that the animal can turn round and dirty the trough. Each sheep is confined by a leathern collar, attached to a slight chain, furnished with a couple of swivels, sufficiently long to secure comfort to the animal, but not long enough to hang back beyond the division of his stall, and to interfere with his neighbor. A feeding trough is placed at the head of each sheep, divided for turneps at one end, and chaff, meal, &c., at the other, and a small rack for clover above. A cast-iron trough to every two sheep, is supplied with water by a stop-cock from a common cistern. A manure trough, two feet wide and deep, made of brick and water lime, and covered with a wood grating, receives the manure, the sheep standing in rows back to back. This needs cleaning once in ten weeks. Shutters to the stalls regulate the amount of fresh air in cold and mild weather. The manure is of the richest quality, equal to guano. The sheep are healthy, and thrive fast, gaining usually two and a half pounds per week, often three pounds, and in some rare instances a pound a day.

These advantages could not be less in our severer winters. These facts were stated in the Gardener's Chronicle.

Farming on a Large Scale.

According to a statement of S. S. Griscom, in the Farmer's Cabinet, the farm of R. R. Bolling, below Richmond, Virginia, consists of 7000 acres of excellent land; 2,700 acres are under cultivation, all having been limed, and enormous crops of clover turned under at every plowing for a crop. The wheat-field has 910 acres, about 20 bushels per acre. There are 545 acres in corn, estimated to average 30 bushels per acre. All the buildings, barns, stables, &c., are of the best construction, and in the most perfect order, and the best management and strict economy are maintained in the manufacture of manure. A spacious barn is furnished with a steam-engine, working a saw mill for the use of the farm, a mill for grinding corn-meal, another for grinding plaster,—and threshing machines capable of cleaning out about 1000 bushels per day. While the writer was there, they averaged 800 bush. wheat per day, threshed, cleaned, and put in the granaries—yet so large is the crop, that nearly a month is employed at this rapid rate, to thresh the whole. The threshers are on the second floor, from which the wheat falls into the fans on the floor below; it is then taken by elevators to the third story, where it passes through screens, and then into the bins, almost without any assistance from manual labor. A cupola surmounts the barn, in which is a large clock, with four faces, so that the time can be seen from nearly all parts of the farm, and the bell which strikes the hours can be heard much farther.

The proprietor offers very liberal terms to northern men of enterprising, industrious, and virtuous habits, to purchase and settle upon his lands.

Sound Views.

Dr. P. Crispell, in his address before the Tlster Co. Ag. Society, makes the following sinsible remarks in relation to the necessity of understanding the principles of agriculture, in order to prosecute farming successfully.

"The time has been that a man was ridiculed if he attempted by education or by study, to prepare himself for attending to his farming scientifically. It is a fact which need not be disguised, that by many, the book farmer, as he is sneeringly called, is looked on with contempt and ridicule. It seems to be the opinion of those who are opposed to education on this all important subject, that farming is simply plowing, and reaping; and that manual labor is the main and almost only element that is required to make the farmer.

But this is far from the truth. To be a farmer, who shall be most profited by his farming operations, it is necessary that he shall well understand his business. There is no calling that requires more the exercise of discrimination, reasoning and calculation, the comparison of cause and effect, than does that of the farmer."

"But he thinks it important the farmer should know how every kind of labor required on his farm should be performed. The advantage of this is obvious; for it will in many cases be difficult to have work properly executed, unless the farmer is capable of practically showing how it should be done. Dr. C. remarks—"It is as necessary for the farmer to know how to hold the plow, to sow the seed, and how to do all the work on the farm, as it is for him to be scientifically acquainted with the condition of his soil. It therefore becomes the duty of the farmer to teach his sons to do all that will be required of the farmer as a laborer to do, and not only to do for the purpose of saying it is done, but to do it well, for by doing work well the greatest benefit will result from it."

Productive Small Farm.

The Cooper farm, near Bushwick, Long Island, according to the committee of the New-York Farmers' Club, consists of only 30 acres, the proprietors being young men, who came in possession only a few years ago, when the land was very barren. With the help of four men, and additional help in picking time, they have the past season supplied New-York with the following articles:—

342 bushels	peas in pod,	yielding	$256
1000 "	potatoes,	"	687
1200 "	tomatoes,	"	600
1200 "	bush beans,	"	528
			$2071

In addition to the above, there remained unharvested at the time the report was made—

500 bushels potatoes, by estimate,
4000 poles thickly covered with Lima beans,
4 acres corn,
1¼ acres Blue-top turnip,
1¼ acres cabbage, 5000 to the acre,
Hay for all their stock,
1-20 acre Cayenne pepper, estimated 25 bush.,
Also, 75 bushels wheat.

Horses of Speed and Bottom.

The *National Intelligencer* furnishes an account of the extraordinary performances of some Californian horses used by Col. FREMONT in traversing a section of Upper California. It is stated that Col. F., with two attendants, performed a journey of eight hundred miles in eight days, including all stoppages and nearly two days' detention. Each of the party had three horses, nine in all, which took their turns under the saddle. The six loose horses ran ahead without bridle or halter, and were kept to the track by the riders. When a horse was wanted for a change, he was caught with the *lasso* thrown by one of the men, the saddle and briddle transferred to him, and the other horse turned loose. This change was made at distances of about twenty miles. The usual gait was a sweeping gallop. The way was over a mountainous country, much of it uninhabited, and many defiles to pass. They travelled at the rate of one hundred to one hundred and twenty miles a day, until they reached a city, San Luis Obispo, about half way to their place of destination, which was Monterey, on the Pacific ocean. At San Luis Obispo the nine horses were left, and eight others taken in their places. With the fresh horses the party pursued their journey to Monterey, and returned to San Luis Obispo. Two of the latter horses had been presented to Col. FREMONT by a Californian, (Don JESUS PICO,) and were considered specimens of a famous breed called "*los canalos*," or the Cinnamons, from their being of a cinnamon color. These two horses were brothers, one a year younger than the other. To test their powers, they were, at the request of the Californian who had presented them to Col. F., put to a severe trial. On leaving Monterey, late in the afternoon, the elder horse was first put under the saddle, and ridden thirty miles, when the party stopped for the night. The next morning the same horse was again taken by Col. F., "and for ninety miles he carried him without apparent fatigue." It was still thirty miles to the place which was to be the end of their day's ride, and the Californian insisted that the horse could easily accomplish it; but Col. F. would not put him to the trial. The saddle was therefore shifted to the younger horse, and the other allowed to run loose for the remaining thirty miles. "He did so," says the writer of the account, "immediately taking the lead and keeping it all the way, and entering San Luis in a sweeping gallop, nostrils distended, snuffing the air and neighing with exultation at his return to his native pastures, his younger brother all the while running at the head of the horses under the saddle, bearing on his bit, and held in by his rider." The eight horses made a hundred and twenty miles a day till their return to San Luis Obispo, when the nine horses that had been first taken were again brought out, and the remainder of the journey performed with them at the rate of a hundred and twenty-five miles a day. It is stated that the grass along the road was the food for the horses during the journey. They are said to be trained with great care, and exhibit remarkable sagacity and spirit. Could not Col. FREMONT procure a few of the best of these horses and send them into the States? If they are what the account to which we have referred represents, they would be the most valuable *trophy* which the conquest of California has yielded us.

Influence of the Press on Ag. Improvement.

Mr. PAYSON in his address before the Essex county (Mass.) Agricultural Society, says—"To enumerate *all* the improvements which have been made in agriculture for the last half century, would take too much time. *One*, not only an improvement in itself, but the *basis* of all other improvements, must not be omitted, and that is the diffusion of agricultural knowledge by the newspaper press. Slowly, silently, almost by stealth, without the knowledge of the man himself, this mighty engine undermines old prejudices, and teaches the farmer that however independent he may be, he is not so as that the experience of others will not profit him. Most of us have become willing to seek *directions* even though they may be contained in a book. We are becoming more like liberal, freeborn and aspiring men."

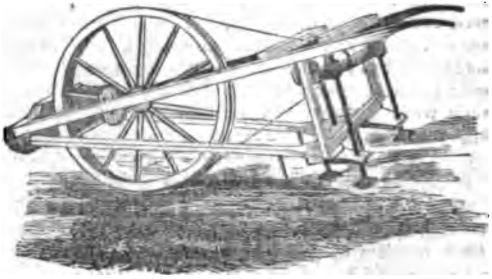
In relation to the same subject, Mr. I. S. HITCHCOCK, in his address before the Oneida county, (N. Y.) society, observes—"A medium of communication between farmers was found to be indispensible to the advancement of their interests, and the periodical agricultural press was established. That agricultural journals are among the most decided, and least expensive means of promoting agriculture, no one who has been favored with their perusal for any length of time, will pretend to deny. While their influence has been highly beneficial, they have injured no one, and since their utility has been fairly tested by experience, that farmer is guilty of an unpardonable inattention to his true interests, who neglects to provide himself with a well conducted Journal of this kind. I am aware there is a prejudice against what some are pleased to call book-farming. And what is this book farming in relation to which such unfounded and untenable prejudices prevail? Farmers communicate to each other the results of their experience in raising horses, cattle, sheep and swine, the best and most economical modes of manuring their lands, the most profitable crops, and the best manner of raising them, the best breed of animals, and the best modes by which they may be fattened—in short, everything relating to the occupation of the farmer. The results are committed to paper, go through the press and become a book, and those who choose to be aided by the experience of others, as there detailed, are guilty of book-farming."

Construction of Fences.

By many, fences are always considered as unsightly objects for enclosing grounds, and all will admit that they may detract very much from the appearance of premises they enclose. In very few cases can they be considered as really ornamental. Most persons seem to have an idea that to have a fence look well, it is only necessary that it should be expensive; and if it is expensive and costly, and somewhat different from others in its construction, it must, as a matter of course, look well. This view of the case appears to me to be entirely wrong. There is no reason why a fence, built with much labor and expense, should of necessity appear well; on the contrary, the more labor and expense, unless the design conforms to, and is in keeping with the buildings and grounds enclosed, the more will it appear out of place. As in building houses, much money may be expended in trying to render it ornamental, without producing the effect desired, merely for want of adaptation. A fence, to appear well, should be appropriate to the buildings and grounds to which they belong. It should be so constructed as to accomplish the ends for which it is required—that is, protection—and should possess strength and durability. These are some of the things necessary in a fence, and without them no fence can appear well. A good, plain, substantial farm-house, should not be surrounded by a light fancy fence, neither by an expensive ornamental one, but by one whose appearance would indicate it to be designed for service, and for protecting the ground which it encloses from all encroachments. On the other hand, a small enclosure around a cottage, while it should be designed for protection, need not be expensive, and at the same time may be made somewhat ornamental. In enclosing a large and expensive ornamental building, it would not be appropriate to place a common farm fence around it, or one of a light and fragile structure; but it should be of a character to correspond in some degree in style and finish with the building enclosed.

To explain my meaning, in my immediate neighborhood, a handsome and expensive brick building, costing from four to five thousand dollars, is enclosed with a fence made with small planed posts about four inches square, with large thin caps, and small rails framed into the posts of about twelve feet in length; into these rails are inserted round pickets, about one inch in diameter and four inches apart. These are painted green, and the remainder of the fence white. The height of the top rails as 3 ft. 3 inches, and the posts project 12 inches above it. Perhaps you will say, it is singular that a man should have sufficient taste to build a handsome house of good proportion and appearance, and not see the propriety of having a fence to correspond with it. But it is easily accounted for. In building, he copied from a house already erected near one of our cities, but he forgot to copy the fence enclosing it. When he came to build this, he exercised his own taste; hence the strange incongruity of appearance. It really detracts from the value, as well as looks of the place. The fence is sufficiently expensive, but sadly deficient in design, and is of very little protection to the grounds, because not high enough to prevent cattle from getting over it. This is but one instance in my own immediate neighborhood. Again, I know of examples where the fence is much more showy, and attracts more notice than the buildings and premises they enclose. These are perhaps extreme cases, but are such, as far as my observation goes, as are of not unusual occurrence.

Cannot you suggest to your readers something on the subject of adaptation and appropriateness of fences as enclosures, or give some examples that will tend to remedy the evils above suggested. J. *Oneida Co.*



Rotary Cultivator.

This new and improved implement, of which the above is a representation, is designed to prevent the impediments that usually attend any and every article heretofore employed in the culture of most kinds of soil. Its construction being such that the edges of the implement, which are ever acting upon the soil, always present a front free from the incumbrance that is usually met where it is stiff and unyielding. Its action is brisk and forcible, by a process which is altogether new, though simple and complete. It needs but a glance to discover, that all that is wanted to make cultivation easy, is here acquired. The proprietor of the above article, whose priority of claim to the invention is about to be secured by letters patent, would hereby give notice to the public, that an opportunity will soon be offered to test the utility and convenience of this machine as specified above.

For a full understanding of the above cut, let the wheel be understood as acting like the wheel of a common wheel-barrow, and causing, by means of the chord the cylinder to revolve. The shafts are thereby put in a semi-opposite motion, causing the circular plates of iron to act in a corresponding motion, and in a two fold manner upon the soil. In this manner the nummerous difficulties attending other implements are overcome, and much labor is saved. T. J. Tuthill. *Elmira, N. Y., Dec.*, 1847.

Bones for Manure.

Dissolving bones in sulphuric acid has been latterly practiced in England, and is considered a preferable mode to applying them in a broken or crushed state. But Prof. Way, in a late lecture on the growth and culture of turneps, states that he prefers muriatic to sulphuric acid for several reasons; though he thinks we may combine the benefits of both plans by the use of salt in addition to that of bones or sulphuric acid. He directs—to two bushels of bone-dust, covered with 15 or 20 gallons of water, half cwt. of common salt to be added. When the salt is well mixed and dissolved, half cwt. of the oil of vitrol (sulphuric acid) is poured upon the mixture. In these circumstances muriatic acid is produced which dissolves the bones. This compound, is said to have a great attraction for water, and will be found to collect the moisture of the atmosphere, and keep the earth moist, even in severe drouth.

NOTICES OF NEW PUBLICATIONS.

The Rose: its History, Poetry, Culture, and Classification. By S. B. Parsons. Published by Wiley & Putnam, New-York.

The author of this work is one of the proprietors of the celebrated Commercial Garden at Flushing. In this volume, which embraces nearly three hundred pages, large octavo, Mr. Parsons has given whatever is known relating to the origin, history and uses of the rose, from the earliest times. In the preface, he informs us that it has been an especial object "to throw around the culture of the rose, a halo of pleasant thoughts and associations," and this we think he has eminently succeeded in doing. He has given the fullest directions, accompanied by neat illustrations, in regard to the propagation of the rose, and its general management, treatment of its diseases, a notice of its medicinal properties, its early history, and its *poetry*. He has given minute descriptions of the most esteemed species and varieties. The directions for culture comprise the results of his own experience, which, as those who have seen the rich and extensive collection of roses in the garden of Messrs. Parsons will admit, has been highly successful. The work is executed in a beautiful style, and deserves to be in the hands of every amateur in rose culture.

Transactions of the Massachusetts Horticultural Society.

We have received the first number of this work, which is hereafter to be issued regularly. It is executed, generally, in a style worthy the distinguished society from which it emanates. This number contains a valuable article on the "Character, History, and Culture of the Pear," by Gen. H. A. S. Dearborn, and also a very valuable and important communication on the "Superiority of native varieties of Fruit," by A. J. Downing, Esq. There are five Chromolithed plates, viz: the two new Camellias raised by M. P. Wilder, Esq., the President of the Society—the Van Mons Leon Le Clerc Pear—the Williams Apple, and the Baldwin Apple—all of them accompanied with full descriptions of the articles they are intended to represent. The plates of the fruits, however, do not exhibit the peculiar characteristics of the varieties in so perfect a manner as could be wished; and the committee of publication say, that "after infinite trouble and disappointment," they "feel satisfied that the process of Chromolithing, in its present state, is not adapted for a work of the character which it is determined to stamp on the Transactions of the Massachusetts Horticultural Society;" and they have, therefore, "resolved not only that the plates of the future numbers shall appear in a very different style, but that, if possible, those of the first number shall be reproduced in a uniform manner." The typographical execution of the work is not surpassed by anything we have seen.

Domestic Animals: History and Description of the Horse, Mule, Cattle, Sheep, Swine, Poultry, and Farm-Dogs; with Directions for their Management, Breeding, Crossing, Rearing, Feeding, and Preparation for a Profitable Market: Also, their Diseases and Remedies, together with full Directions for the Management of the Dairy. By R. L. Allen. Published by C. M. Saxton, New-York.

This work, with some important additions, constitutes a small part of the "Compend of American Agriculture," a volume by the same author. It will be found a convenient and useful manual. Mr. Allen is a sensible and intelligent writer, and he has embodied a large amount of valuable information in the little work before us. The subject matter seems generally to have been derived from his own experience and observation, and the style of expression is plain and comprehensive. [See advertisement.]

Downing's New Work.—Messrs. Wiley and Putnam have just issued a new edition of Mr. Downing's "*Fruits and Fruit Trees of America*," with *seventy Plates of colored Fruits*, forming the most beautiful as well as the most valuable volume which has been issued from the American press on this subject—price $15.

Medico-Chirurgical Review.—This excellent work is hereafter to be united with "Forbes' British & Foreign Medical Review"—the title of the combined work to be "The British and Foreign Medico-Chirurgical Review."

The republication of the Medico-Chirurgical Review, has for more than twenty years been conducted by Messrs. G. R. & S. Wood, of New-York. The reputation of the work has always been of the highest character, both in Great Britain and this country. The publication with which it is now united, has also been of long standing, and has sustained a high rank with the medical faculty. It is confidently expected, therefore, that an union of the two works, aided by the contributors which have formerly supported them, will result in the production of the best medical journal extant.

We are informed that several pages of "Addenda," forming a "Quarterly Retrospect of American Practical Medicine and Surgery," will be attached to each number of the republished work, and that no charge will be made for the addition, to all subscribers who pay in advance.

We presume the new work, like its predecessor, the Medico-Chirurgical Review, of which we have frequently spoken in terms of high commendation, will be eminently deserving support, and we cannot doubt it will be liberally bestowed. Published Quarterly, by G. R. & S. Wood, New-York—$5 per annum in advance. [See advertisement, p. 39, of this number.]

Graham's American Monthly Magazine.—This monthly for January is already on our table, rich in engravings and matter. It has three beautiful steel plates, one of which is a portrait of Gen. Wm. O. Butler, of Kentucky—with a biographical notice by F. P. Blair, Esq. Among the other contributors to this number, which contains 24 extra pages, are Messrs. Cooper, Fay, Willis, Simms, Herbert, Roe, Paulding, Chandler, Bryant, Mrs. Sigourney, Mrs. Ward, and several others well known to fame.

Godey's Lady's Book for January, with its beautiful embellishments, and 24 pages of extra matter, has already appeared. The engraved title-page is worth the price of the number, to say nothing of the other illustrations. Among the contributors to this number, are Mrs. Kirkland, Mrs. Ellett, Mrs. Hale, Miss Leslie, Grace Greenwood, Arthur Taylor, Weld, and others. [See advertisement.]

Farmer and Mechanic, a weekly publication, devoted to Agriculture, Mechanics, Science and the Arts. It is a spirited work, and furnishes much information on the subject, to which it is devoted. In mechanics it furnishes many illustrations of new machines, notices new inventions, and we should think would be highly useful to persons engaged in mechanical employments. Its terms are two dollars a year, *in advance*. W. H. Starr, editor and proprietor, New-York.

Answers to Inquiries.

Chinese Geese.—J. C. N. A., Richfield Springs. Chinese Geese can be had in this vicinity at $5 per pair. We cannot tell how much weight in feathers a pair will produce in a year. They are not large, but the feathers are thickly set, and appear to be finer than those of common geese. They readily breed with any of the domestic kinds.

Carrots.—"A Subscriber," Frederick, Md. Carrots are usually fed raw to horses and cattle. They are sometimes fed to hogs, but do not seem to be as valuable for them as for some other kinds of stock. Directions in regard to their culture may be found in the Cultivator, vol. 2, new series, page 154, and in vol. 3, p. 159.

Pea-Nut, (*Arcahis hypogæa,*) or Ground Pea.—P. N. Norristown, Pa. This article is considerably cultivated in some of our southern states under the name of *pindars*. The seed is planted in rows five feet apart, and a foot apart in the row, as early in spring as the weather and the state of the soil will admit. They are dug in the fall before hard frost. The tops dried, make good fodder for horses and cattle. It is said that the poorest land in Mississippi will produce from fifty to eighty bushels of peanuts per acre. The only cultivation needed is to keep the ground clean.

Preservation of Cabbages.—F. G. R., Shadwell, Va. In a climate as mild as that of your section, we should suppose the best way of preserving cabbages through the winter, would be to place them in long piles or winrows, and cover them with straw or corn-stalks. A layer of earth in addition may be needed in the coldest weather. They are easily taken for use as they may be wanted, by beginning at one end and continuing to take them till the pile is finished.

Guano.—P. R. B., Cattawissa, Pa. Two hundred pounds of guano is the quantity usually recommended for an acre. It should be previously mixed with about four times its bulk of finely pulverized earth—sand will be most convenient for the purpose—and it may be spread broadcast on the surface of the ground immediately before putting in the seed. It is sometimes applied to gardens in a liquid state. Four pounds of guano are put to twelve gallons of water, and after it has stood twenty-four hours, it is applied to the ground by a watering apparatus.

Converting Corn-Stalks into Manure.—P. H. A., Baltimore Co., Md. The best way of "converting dry corn-stalks into manure, *speedily*," with which we are acquainted, is to pass them first through a strong cutting machine, calculated for the purpose, and then place them in a heap with manure, or muck, and saturate it with urine. The urine may be saved by conveying it from the stalls where the animals are kept, to tanks, or temporary hollows, from which it may readily be taken to the heap. Fermentation will take place in a short time.

Price of Wood in Paris.—An American in Paris says, that so high is the price of wood in Paris, in consequence of the forests having been mostly consumed, and the high duty on English coal, that it is usually sold by the pound—and that the dealers keep it locked up in-doors, "lest while the wood-merchant was looking one way, some scoundrel might fill his pockets, and be off!"

Prices of Grapes.—P. Barry says that the common market price of the best exotic grapes, raised in houses at Boston, is 75 cents to $1 per lb.

New-York State Ag. Society.

The annual meeting of the Society will be held on the *3d Wednesday (19th) of January at the Capitol.* On Wednesday evening an address will be delivered by Prof. J. P. Norton of Yale College. On Thursday evening, an address by the President, George Vail, Esq. The reports of Committees and awards of premiums will be made on Thursday morning at the agricultural rooms. B. P. Johnson, *Sec'y.*

COMMITTEES APPOINTED FOR WINTER MEETING.

☞ Their attendance is desired as early as Tuesday morning the 18th of January.

Management of Farms.—J. Stanton Gould, Columbia, and A. Van Bergen, Greene.

Stall feeding Cattle, and fattening with Indian Corn.—S. Howard, Albany, and Henry Wager, Oneida.

Draining and Top Dressing.—J. P. Beekman, Columbia, and A. Ayrault, Livingston.

Designs for Farm Buildings.—Wm. Buel, Monroe; B. N. Huntington, Oneida, and J. McD. McIntyre.

Cheese Dairies.—B. P. Johnson, Oneida, and Thos. Burch, Herkimer.

Butter Dairies.—R. Denniston, Orange, and J. Carey, Albany.

Wheat and Indian Corn.—George Geddes, Onondaga, and L. C. Ball, Rensselaer.

Barley, Rye, Oats, Peas, and Beans.—E. Comstock, Oneida, and W. P. Coons, Rensselaer.

Potatoes, Ruta Bagas, &c.—E. P. Prentice, Albany, and Martin Springer, Rensselaer.

Corn Fodder, Hay, Hops, &c.—Benj. Enos, Madison, and Seth Hastings, Rensselaer.

Experiments, Soiling, and Manures.—Prof. E. Emmons, Albany, and Joseph Daniels, Saratoga.

Management of Sheep.—M. Y. Tilden, Columbia, J. McDonald, Washington.

Fruit.—L. F. Allen, Sam'l Young, H. Wendell, A. J. Downing, and J. W. Bissell.

Live Stock in Vermont.—Vermont will probably always be a stock and wool-growing state. Her hills and vales, and the thousand cool and refreshing rivulets that empty themselves from the one to the other, has destined it for a grazing country. In 1840, she had more horses and more neat cattle than any of the New-England States; her number of sheep was nearly equal to the whole of those states combined. She cut more hay and produced more oats than either. The value of her dairy products was but a trifle below that of Massachusetts, and it would have exceeded that even, were it not on account of our distance from market. She stands next to the great state of New-York in her quantity of wool, and her quantity to each individual is about double that of the last mentioned state. —*Richardson's Address.*

Effects of Famine.—The village of South Reen, in the west part of the county of Cork, says the Southern Reporter, contained in the early part of the year 62 houses, and 320 inhabitants. It now has but 50 inhabitants, and 8 small hovels remaining, the rest of the houses having been broken up to furnish coffins for the dead and fuel for the living.

Potato Crop in Ireland.—It is estimated that, until the present year, the potato crop in Ireland has occupied two million acres—the present year it is estimated that only *one-fourth* the usual quantity has been planted, the remaining three-fourths having been planted with other crops, or remaining uncultivated.

To save Horses from Fire.—The difficulty of getting horses from burning stables is well known, to remedy which, *blind-fold* them perfectly, and by gentle usage they may easily be led out.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from A Vinedresser, J. C. N. A., P. N., R. W., F. Holbrook, Prof. J. P. Norton, H., A Horticulturist, B., Cheap Comfort, Erastus W. Ellsworth, S. W. Jewett, T. J. Tuthill, H. A. Parsons, J., N. B. V., A Manual Laborer, David Thomas, X., S. Atherton, W. R. Peck, J. G. C.

Books, Pamphlets, &c., have been received since our last, as follows:——*Address of Ira S. Hitchcock, Esq.*, President of the Oneida Ag. Society, together with the Reports of Committees, &c., of the Society, from Jas. Rees, Rec. Secretary.——*Oswego Beurré Pears*, from J. F. Allen, Esq., Oswego.——*The Rose*, its History, Poetry, Culture and Classification, by S. B. Parsons, from the publishers, Wiley & Putnam, New-York.——*Catalogue of New Works*, published by Wiley & Putnam, New-York.——*Horticultural Report* of the American Institute for 1847, by Thomas Bridgman. *Mr. Payson's Address* before the Essex (Mass.) Ag. Society.——*Transactions of the Mass. Hort. Society*, No. I.——*Address of B. P. Johnson*, before Greene co. Ag. Society, with account of Fair, &c.——*Morning Star* for the New Jerusalem Church, containing the Essentials of all the Scriptures or Word; being thus a Guide for Man in all his Duty to himself, his fellow man and neighbor. By James Cramer Ott. Baltimore: Sherwood & Co.——*Report on Farms*, by the committee of the Talbot Co. (Md.,) Ag. Society.——*Domestic Animals:* their History, Description, Management and Diseases. By R. L. Allen. New-York: C. M. Saxton.——*Catalogue of Astoria Nursery*, by L. Prevost.——*Introductory Lecture* on the relations of Chemistry to the Vital Force, by D. P. Gardner, M. D., Prof. of Chemistry, &c., in the Philadelphia College of Medicine.

New Illustrations—The portrait and memoir of Judge Buel, given in our present number, we design as the commencement of a series of similar illustrations and articles. Many individuals have been distinguished for the exertions they have made in the improvement of the agriculture of the country; and we believe that a proper record and exhibition of these examples, cannot fail to exert a salutary influence on society. We have, therefore adopted means for procuring materials which will enable us to furnish portraits and biographical sketches of several gentlemen, which we think will add greatly to the interest as well as value of our columns, and will, we have no doubt, be duly estimated by our readers.

☞ An article on Massachusetts Farming, which was prepared for this number, is unavoidable deferred to our next.

☞ Will some of our readers inform us whether the black-berry is cultivated?—stating the mode of cultivation, and the success in the production of fruit.

Erratum.—In "*Notes of a Traveller in England and Wales*," in our December number, for "Ouns Head," read Orms Head.

Samples of Wool.—We have received from James M. Trimble, Esq., of Hillsborough, Ohio, some samples of wool from his flock of sheep. The samples are not of uniform quality, but some of them are nearly equal in fineness to the best Saxon in the country.

Large Hog.—Mr. Jennings, provision dealer of this city, purchased a full blood Berkshire hog, two years old, which weighed, dressed, 720 lbs., from Mr. Samuel Shaw, of Berlin, in this county.

Fine Cattle.—A pair of extraordinary oxen, raised by Allen Ayrault, Esq., of Geneseo, passed through this city on their way to Boston in November last. They tarried here a few days, and we had an opportunity of seeing them. They are twins, nearly full-blood Durhams, and though but six years old, were geatly superior in size and fatness to any cattle we have before seen. In symmetry and "*quality*," (as the English butchers say,) they were also remarkably fine; one of them in particular, the darkest colored one, we think decidedly the *best* ox we ever saw—he had a larger proportion of high-priced meat, compared with the inferior portions and offal, than any other animal of his species that we have met with. We intended to have had the dimensions of this ox taken accurately, that they might have been compared with the celebrated "English Durham ox," bred by Chas. Colling, but he left here before we had an opportunity. It was the opinion of our best judges, several of whom have been acquainted with the best cattle in Great Britain, that these oxen would compare favorably with any of the prize animals in that country. We did not learn the exact live weight of these cattle. When they are slaughtered, we would thank some one to forward us an accurate account of their weight.

Fuel.—If the farmer has not already obtained a year's supply of wood, he should endeavor to procure it before the snow gets deep. Wood can be cut to the best advantage when the ground is bare, or only covered with a few inches of snow. The trees can then be cut low, the limbs readily trimmed up, and all the wood saved. It should be piled in the woods till it is convenient to convey it to the house or to market. The most convenient mode of carrying is by sleds, and the first favorable snow should be taken for this purpose. Before the first of April it should be sawed, (not cut up with an axe,) and every stick that is more than two inches through, should be split, and it should be placed under cover to season. Wood thus managed is much better than that which remains in the woods till the bark rots off, to say nothing of the extra comfort and satisfaction to be enjoyed by it.

Seedling Apple.—Mr. C. E. Boardman, of Cairo, Greene County, N. Y., has left us a specimen of an apple said to have been raised from seed in his neighborhood. We think it highly deserving of notice. It is of rather large size, and in color resembles the Maiden's Blush. Its flaver is good. Ripens from November to January.

☞ Mr. Peter Van Ness, has left us two samples of apples, the names of which he wishes to learn. One of them is an excellent kind, somewhat resembling the Fall Pippin, but a much later keeper. We will endeavor to ascertain its name. We have also received from Rodman Sisson, Esq., of Abington, Susquehannah Co., Pa., some very handsome specimens of the Greening, Belleflower, Jilleflower, and one or two varieties unknown to us.

☞ We are informed that the horse Gifford Morgan, lately owned by Mr. F. A. Wier, has been sold to a company, the members of which reside in Vermont and New Hampshire, for two thousand dollars. He was placed in shares of one hundred dollars each, his former owner, Mr. Wier, retaining one share. We learn that this company, or some of the members of it, own several mares of the highest existing Morgan blood, which have been bred, and are in future to be bred, to the above horse. This arrangement, with other efforts which are being made, will ensure the perpetuation of this valuable stock, which would otherwise have been lost beyond recovery in the course of a few years. The old horse, though coming *two-and-twenty*, is still vigorous, and capable, with good usage, of much service.

THE "PHŒNIX STOCK" OF CATTLE.—In our notes on Massachusetts farming, we had occasion to mention some cattle called the "*Phœnix Stock.*" We saw some of this stock on the farms of B. B. BELCHER, Springfield, PLINY CHAPIN, and CHESTER W. CHAPIN, of Chickopee, and in other places. The resemblance among them is very striking—not only the half-bloods, but those of a quarter-blood, and even less, exhibiting the family traits so plainly that it was easy to distinguish them from other animals in the herds. Their leading points are a lean head, with horns of medium length; prominent eye; long neck, rather small at the junction of the head; a straight back; moderately round body; deep hind quarters; clean, flat legs; color generally yellowish dun, with brindled streaks. Nearly all of them are good handlers, and they are generally excellent for the dairy.

On inquiring the origin of this stock, we were told that it was derived from a bull introduced by the Rev. Mr. PHŒNIX, late of Chickopee, (now of New Haven,) in 1835 or '36. Mr. LATHROP, of South Hadley, informed us that he had taken some pains to ascertain his blood. Mr. L. found that he came from a cow owned by Judge INGRAHAM, of New-York. She was imported, and was called a "Durham cow." The bull was dropped on the passage from England, or soon after the cow arrived in this country. This was all which could be told of the bull's pedigree. He was spotted, white, with large patches of brindled-yellow. He was small and poor when brought to Massachusetts, but after a year or two grew well, and became a mediumed-sized animal. It has been *conjectured*, from the color and quality of the stock, that he was a mixture of Short Horn and Alderney blood.

At the Hartford show we saw a superior cow, belonging to Mr. JAS. H. CHARLTON, of East Windsor, which we were told was of this stock. Mr. C. stated that 28 lbs., 1 oz. of butter were produced from her milk in two weeks, in June, 1847, and that from the 12th to the 22d of June, the weight of her milk averaged 57 lbs. per day—her keeping grass only.

We suggest that efforts be made to preserve this stock. Let the best of the cows be put to bulls which will be likely to preserve in their progeny the valuable qualities for which the family is distinguished.

ADULTERATED WINES.—A correspondent in Dutchess county says:—"The article on wines in the December number of the Cultivator, reminds me of a fact that came to my knowledge in Paris. A physician attending lectures in Paris, told me that he analysed a bottle of the lowest priced wine there, (Paris)—the *Vin Ordinarie of laborers, &c.*, and found that it contained a quantity of the *Sugar of Lead.*"

SALES OF STOCK.—We noticed last month some fine cattle and sheep from LEWIS F. ALLEN, Esq., of Buffalo, destined for E. K. BROWN, Esq., of Mississippi. There was a yearling Durham bull, and two Devon heifers—the latter two years old. The sheep were a pair each of Cotswolds and South Downs. Having been several days on their journey under unfavorable circumstances, they did not, of course, appear to that advantage they would have done in their own stables or yards; but should they succeed in reaching their destination without material injury, we presume, from their good points, they will prove creditable to their breeder, and to the breeds to which they belong.

C. N. BEMENT, Esq., of this city, has lately disposed of some stock to Dr. J. N. LANGDON, of Kennebunk, Port, Maine. The stock consisted of a bull calf and a yearling heifer, a cross of the Ayrshire and Durham. They were very pretty animals, and we presume will make good dairy stock.

CULTIVATION OF ONIONS.—Mr. H. W. S. CLEVELAND, of Burlington, N. J., requests that some of our Eastern correspondents would give, through the Cultivator, an account of their mode of raising onions as a field crop. He wishes to know "what kind of soil is best, how it is prepared, what is the after-culture, and the best time and mode of harvesting and preparing for market, and what is considered a fair yield per acre?" He asks, also, whether a natural growth of wild garlic is any evidence that the soil is fitted for onions? We presume many of our subscribers could reply to these queries, and we should be glad to hear from them.

EXHIBITION OF THE PROVINCIAL AGRICULTURAL ASSOCIATION OF UPPER CANADA.—This Society held a splendid exhibition at Hamilton, on the 7th of October last. The weather was very unfavorable, but there was notwithstanding a vast crowd of people in attendance, and the display of stock, implements, fruits, &c., appears to have been very extensive. We rejoice at the improvement which is evidently going on in the agriculture of the Canadas. The government and leading individuals seem to be warmly engaged in the cause. We are informed that there are already in Western or Upper Canada, upwards of one hundred agricultural societies, and with these means, and the fertile soil and ready markets which the farmers of that section possess, we cannot doubt that they will shortly become eminently prosperous.

PREVENTING THE POTATO ROT.—An intelligent farmer on a small scale, has tried a remedy for several years, which, though not new, has been attended with such uniform success, as to deserve mentioning. He cultivates the Mercer, a variety well known to be unusually liable to the rot. The crop is planted *very early*, almost as soon as the snow disappears in spring, so that the potatoes are fully matured by the end of summer. In the latter part of the eighth month (Aug.) the potatoes are dug, and immediately housed in as dry and cool a place as possible. By this means he has never lost a bushel, although his neighbors, who live close at hand on either side, and who plant and harvest their crops later, have suffered abundantly.

THE APPLE CROP.—The inequality of the apple crop in different regions the past season, is remarkable. In central Ohio, in the valley of the Hudson, and on the seaboard, this fruit has been more or less cut off; while in a large part of western New-York, it has not been so great for several years. A correspondent on Long Island states that in an orchard of twelve acres, he did not obtain half a bushel. Another correspondent in East Greenwich, gives the following account of the singular circumstances attending its destruction in that part of Rhode Island:—"We had the most meagre prospect of apples I have known for years, and the Rose bugs in myriads attacked the scattering fruits while not larger than a nut, and from ten to twenty might be seen upon a single fruit. Nothing equal to it was ever seen in this region; the destruction is long on the seaboard; and fortunately a west wind blew them into the sea in such quantities, that they literally formed a winrow on shore for miles, and a wagon load might have been collected in a short time on some parts, as I have been informed repeatedly."

SCIENCE AND PRACTICE IN FARMING.—B. P. JOHNSON, Esq., in his address before the Greene County Agricultural Society, makes the following just observations in regard to combining science and practice in agriculture:—"The man who in his study theorizes about farming, and never has had his theories tested in the field, is not the man we need. But where practice and theory are combined and carried out by the *practical farmer* on his farm, we cannot fail eventually to receive great advantages. I would urge, therefore, upon farmers, to give the results of their labors through the agricultural press, and thus contribute to the dissemination of facts which will benefit others, and may lead to the most auspicious results."

Measuring Hay.—The Mass. Ploughman says that 600 cubic feet of hay are usually sold for a ton, if well packed—equal to a mass ten feet square and six feet high. But in deep bays, 500, and even 400 in some extreme cases, will make a ton. A farmer who has a bay 20 by 30 feet, and 15 feet high, may therefore reckon upon having about 15 tons of hay; the amount will of course vary with the kind of hay. A little measuring and subsequent weighing would soon enable any farmer to determine with considerable accuracy the quantity of hay he may have on hand, and make his calculations accordingly.

Wheat in Northern England.—A correspondent of the Genesse Farmer, now in England, says that the soil between Carlisle and Newcastle, does not appear to be superior to that of Monroe county, N. Y., yet thirty bushels of wheat per acre is a very common yield, often forty, and sometimes fifty. Although this fine product is largely attributable to good farming, he thinks it is in some degree owing to the coolness of the climate favoring more perfectly the ripening and filling of the heads.

Wheat and Chess.—Wm. Powers, of Youngstown, Ohio, gives the following experiment in the Ohio Cultivator:—He was about sowing his wheat, believing it to be *perfectly clean*; but, on being advised, concluded to brine and lime it first. When the brine was poured on, to his surprise he found chess floating thickly on the surface, and on being skimmed off, about a pint and a half were obtained from each bushel of seed. This would thoroughly seed any ground; but if the wheat grew well, the chess would be kept small and hidden; where winter killed, it would spring up, spread out, and occupy the whole ground, and be attributed by superficial observers, to the change of the killed wheat to chess. The wheat, however, was thoroughly cleaned by brining, so that where it was winter killed and fly-eaten, no chess appeared.

Irrigation in China.—In cultivating *rice*, the sloping land is formed into terraces, and a stream is conducted upon the upper terrace, and from that to each successive one below, thus flooding the whole surface to the depth of several inches, or sufficient for the rice. As soon as the crop assumes a ripening hue, the water is readily turned off from any of the terraces.

Winter Feeding Cattle.—Wm. Wallis, an intelligent correspondent of the Ohio Cultivator, states a great improvement in the winter feeding of cattle, which consists in *warming* the food by fermentation. This is effected in large wooden boxes or vats, holding about a hundred bushels each. Sliced roots, chaff, cut straw and hay, &c., moistened with water, are jammed, and covered tight. In three days they are fed out, three times a day. Three boxes keep up a regular succession of this heated food. Cattle are fond of it, and thrive finely.

Fertility of Subsoil.—It sometimes happens that the subsoil contains very enriching ingredients, and becomes of great value when brought to the surface. H. N. Gillett, in the Ohio Cultivator, states that on the farm of James Kelly, Lawrence county, Ohio, land obtained in digging a well, was planted with corn, and gave an extraordinary product, some of the ears being *twenty-two inches* in length. Experiments on a small scale, by trench-plowing, are easily tried on every farm; and in many cases they would lead to highly important and valuable results.

Draught in Plowing.—A correspondent of the Farmer's Cabinet, very justly observes that farmers often commit a great error, in shortening the draught too much under the supposition that they lighten the exertion of the team. They may do so, with a cart or sled, the load being in part transferred to the horse's backs. But in plowing, "the plow must be *set* so as to *swim*, without any tendency to rise or sink;" this important object being attained, the length of chain is immaterial.

Apples to China.—R. L. Pell, of Ulster, has shipped a hundred barrels of Newtown pippins to China; the first shipment of apples made to that country.

Green and dry Fodder.—Boussingault has come to the conclusion, from actual and carefully conducted experiments in feeding cattle, that a given quantity of fodder, whether green or dry, contains the same amount of nutriment; that is, an acre of hay will go as far in feeding, if fed dry, as it would if fed immediately after cutting.

Paring Apples.—The N. Y. Farmer and Mechanic says that an improved machine for paring apples has been patented by Bullock and Benson of New-York, which will "perfectly take off the skin of an apple, in the neatest manner, in about one second, and continue to work at this rate as fast as the apples can be taken off and put on. It is quite simple in construction. The price two and a half to three dollars."

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Dec. 22, 1847.

FLOUR—Genesee per bbl. $6.31¼a$6.50—Ohio and Michigan $6.12½a$6.25—Buckwheat flour, $2 per 100 lbs.

GRAIN.—Wheat, Western. per bu., $1.40—Corn, northern, 71a74c.—Rye, 87c.—Oats, 49a50c.—Barley 80c.

BUTTER—Orange County, per lb., 19a21c.—Western, dairy, 11a16 cents.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $8.50a$8.75.—Prime $5a$5.50.

PORK—Mess, per bbl., $12—Prime, $8.

HAMS—Smoked, per lb.,

LARD—Per lb. 8a8½c.

HEMP—Russia clean, per ton, $230.

HOPS—First sort, per lb., 6a8c.

COTTON—New Orleans and Alabama, per lb., 6¼a8¾c.—Upland and Florida, 6¼a8½c.

WOOL—(Boston prices,) Dec. 22.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,..................	40a45	"
" three-fourths blood fleeces,.........	35a38	"
" half blood do	32a35	"
" one-fourth blood and common,.....	28a30	"

Live-Stock Market—Brighton, Mass., Dec. 20.

At market, 550 Beef Cattle, 100 stores, 21 yokes of Working Oxen, 25 Cows and Calves, 2,800 Sheep and Lambs, and 600 Swine.

In consequence of the small number of Cattle, prices advanced a trifle from our last quotations.

Prices—Beef Cattle: We quote extra $6.75; first quality $6a6.50; second quality $5.25a5.75; third quality $4a4.75.

Sheep and Lambs: Sales of lots at from $1.33 to 2.36.

Swine: Lots to peddle at 4½ for Sows, and 5 3-8 for Barrows; at retail 5½a7c.

THE LADY'S DOLLAR NEWSPAPER,

CONTAINING articles from the best writers of England and America, and translations from other languages. Also, all the

English Annuals Entire,

which cost in this city from $5 to $10 each. An Annual will be published in one number, which will cost about four cents to the subscribers of the Lady's Dollar Newspaper.

In addition to the above, the paper will contain Tales, Poetry, Essays, Feminine Accomplishments, Useful Receipts for the Toilet, (from a work which has been imported expressly,) Fashions, Health, Fancy Work, Housekeeping, Domestic and Fancy Cookery, from Soyer's great book, just published.

It will be seen that the subscribers to this work will receive twice a week for one dollar, that which in any other shape would cost them from $3 to $6.

TERMS.

Single copy one year in advance, $1; six copies, $5; thirteen copies, $10.

A copy of either work sent as a specimen gratis to any person who will pay the postage on the letter requesting it. Address

L. A. GODEY,
Jan. 1—2t. 113 Chestnut-st., Philadelphia.

VALUABLE BOOKS

For sale at the Office of the Cultivator.

FRUITS AND FRUIT TREES of America—illustrated edition, with Seventy colored Plates of Fruits—price $15.—Also, the cheap edition of the same work—price $1.50.

THE FRUIT CULTURIST, by J. J. Thomas—price 50 cents.

THE HORTICULTURIST, Vol. I, by A. J. Downing—bound in muslin, $3.50—stitched, in French style, to send by mail, $3.00.

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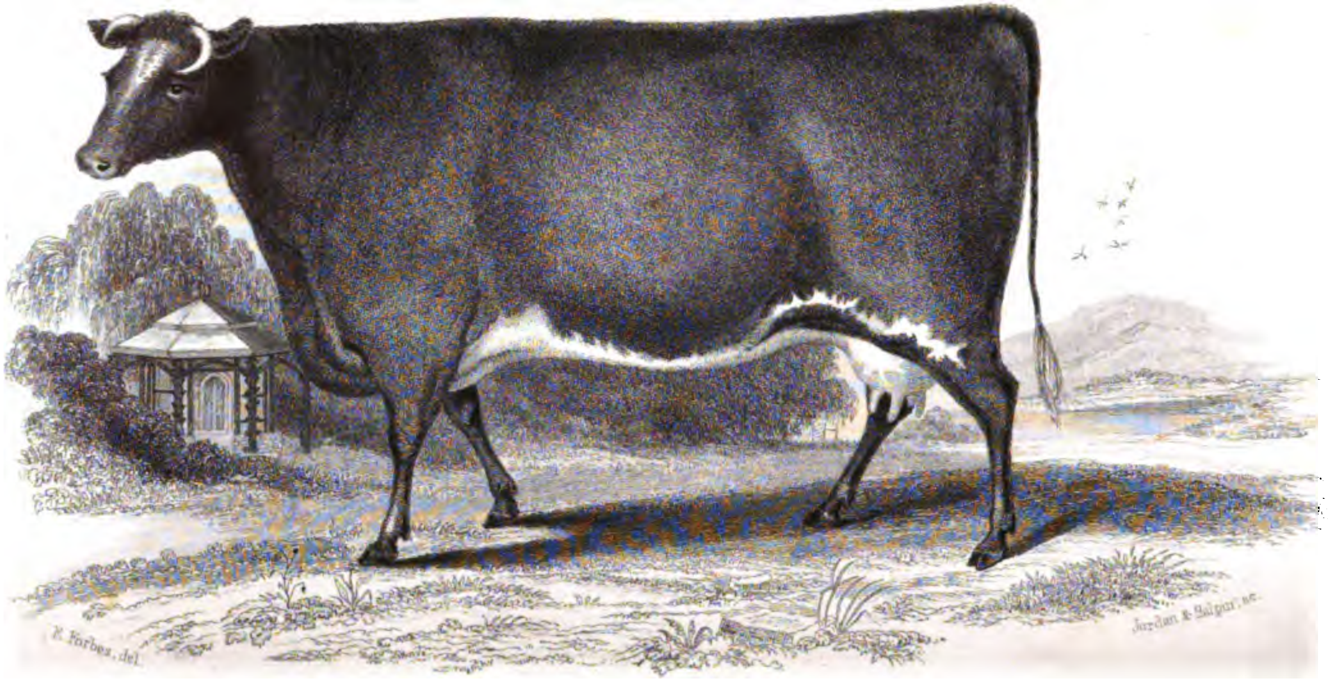

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, FEBRUARY, 1848. No. 2.

OUR PLATE—AYRSHIRE CATTLE.

THE principal design of our plate, is to furnish a portrait of the imported Ayrshire cow *Ayr*, (on the left,) but in order to convey an idea of her size, her figure is accompanied by that of a medium-sized Durham cow, *Charlotte*—the proportions corresponding to the relative size of the animals; both of which are the property of E. P. PRENTICE, Esq., of Mount Hope, near Albany.

Ayr, whose likeness has been very accurately delineated by Mr. VAN ZANDT, is nine years old, and was imported in 1842. She is nearly a model of what, in our opinion, a *dairy cow* should be, and on this account we deem it proper to give a tolerably full description of her. She possesses in a high degree the excellent milking properties which distinguish the best of the breed to which she belongs, united to a more perfect symmetry than we have ever seen in any other Ayrshire, and which we have seldom, if ever, known equalled in *any* breed. Her body, (as will be seen by a comparison of the figures,) is small; but her frame or bone is proportionately less. The head is small, the face dished, the forehead broad, and the eye prominent. The neck is small at the junction of the head, but pretty deep and full at its connection with the body. The back is straight, the crops fine, the ribs round, the loins broad, the flanks deep, the udder capacious, (spreading wide on the body, but not hanging low,) and the milk-veins large and prominent. The legs are small, but strong, hard and sinewy, like those of a deer. The great depth and length of the hind quarters might, from a profile view, give the idea that the chest was too light; but though the hind quarters are proportionately heaviest, (as we prefer to have them in a milch cow,) there is no deficiency in the fore end. The sternum (or breast-bone) is wide, the fore legs stand wide apart, the bosom is full, and the first ribs are particularly full and wide-spread at their junction with the sternum, giving a chest of great capacity for an animal of her size.

As her form and general appearance indicate, she is healthy and hardy. Her skin is of a yellowish hue, mellow and elastic; and though she does not possess the fattening quality in an *excessive* degree, or to an extent that would interfere with her dairy qualities, she thrives very rapidly when not giving milk. The quantity of milk she affords is, in proportion to her size, quite extraordinary. She has given, when on grass-feed only, upwards of twenty quarts (by actual measure) per day, and she continues in milk till near calving. No particular experiments have been made with her in regard to butter, but her milk has been ascertained to produce a large proportion of the richest cream.

Her offspring are much like herself. She has had four calves since she left Scotland. The first, a heifer, was dropped on ship-board during the passage; the next, a very fine bull, is now owned by Mr. J. W. HOWES, of Montpelier, Vt.; the next a bull, now nearly two years old, a very superior animal, inheriting in a remarkable degree the characters of the dam; and the next a heifer, equally as fine as her other progeny, now about two months old. The two last, together with three grand-daughters of *Ayr*, are still in Mr. PRENTICE's possession.

The origin of the modern Ayrshire breed of cattle, is a subject on which there has been some controversy. YOUATT says there was no such breed in Scotland a century ago. It is evidently an artificial variety, but, as Prof. Low observes, "authentic records are wanting to show by what progressive steps it has been moulded into its present form." The same author states, however, that at the time he wrote, 1841, they had "spread over a large tract of country, and by continued mixture with one another," had "acquired such a community of characters, as to form a *distinct and well-defined breed*."

"Tradition," he observes, "refers to an importation of individuals of the Alderney breed to the parish of Dunlop, which became first distinguished for its cows and the produce of its dairy. This tradition is almost confirmed by the similarity existing between the Alderney breed and the modern Ayrshire, which is so great as to lead us, independently of tradition, to the conclusion, that the blood of the one has been largely mingled with that of the other."

The improved variety of Ayrshire, was long known by the name of the "Dunlop breed," and there is evidence that it was distinguished and sought after sixty years ago. We are informed that ROBERT BURNS, when he resided on a farm at Nithsdale, in Dumfrieshire, introduced this stock to that neighborhood. It was (or a part of it at least) presented to him by the proprietor of Dunlop House, whose lady, Mrs. DUNLOP, was a special friend and patron of the poet. In a letter dated Nov. 13, 1788, he speaks of a heifer which he had thus received as "the finest quey in Ayrshire."*

YOUATT refers to "*Rawlin's Cow-doctor*," published at Glasgow in 1794, in which, speaking of the cattle of Ayrshire, it is said:—"They have another breed, called the Dunlop cows, which are allowed to be the best race for yielding milk in Great Britain or Ireland, not only for large quantities, but also for richness and quality. It is said to be a mixture by bulls brought from the island of Alderney with their own cows." It appears also, from various accounts, that the Short-Horned or Tees-water cattle were introduced into Ayrshire at an early day. The Short Horns were frequently called the Dutch breed in former times, but it is mentioned that Holstien or Dutch cattle from the continent were also imported to Ayrshire.* Prof. Low concludes, therefore, that—"from all the evidence which, in the absence of authentic documents the case admits of, the dairy breed of Ayrshire owes the characteristics which distinguish it from the older race, to a mixture with the blood of the races of the continent, and of the dairy breed of Alderney."

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* Correspondence of Burns, Currie's edition—page 127.

Lawrence, who wrote in 1809, says:—"I apprehend this milky race [the improved Ayrshire] to be the result of crossing the cows of the country with Alderney bulls, the cows, perhaps, having previously a portion of Dutch blood."

Most authorities agree with the above in regard to the origin of the present Ayrshires. It is for dairy purposes that they are considered especially valuable, and in this respect are reckoned second to none in Great Britain. Their distinguishing characteristics are given by Low as follows:

"The modern Ayrshire may stand in the fifth or sixth class of British breeds with respect to size. The horns are small, and curving inward at the extremity, after the manner of the Alderney. The shoulders are light, and the loins very broad and deep, which is a conformation almost always accompanying the property of yielding abundant milk. The skin is moderately soft to the touch, and of an orange-yellow tinge about the eyes and udder. The prevailing color is a reddish brown, mixed more or less with white. The muzzle is usually dark, though it is often flesh-colored. The limbs are slender, the neck small, and the head free from coarseness. The muscles of the inner side of the thigh, technically called *the twist*, are thin, and the haunch frequently droops to the rump—a character which exists likewise in the Alderney breed, and which, although it impairs the symmetry of the animal, is not regarded as inconsistent with the faculty of secreting milk. The udder is moderately large without being flaccid. The cows are very docile and gentle, and hardy to the degree of being able to subsist on ordinary food. They give a large quantity of milk in proportion to their size and the food they consume, and the milk is of excellent quality. Healthy cows, on good pastures, give 800 to 900 gallons in the year, although taking into account the younger and less productive stock, 600 gallons may be regarded as a fair average for the low country, and somewhat less for a dairy-stock in the higher."

The Ayrshires which have been brought to this country have varied, somewhat, in character and qualities; but not more so, we think, than the Durhams or Short Horns. As with other breeds, all Ayrshires are not equally valuable, and some importers may have been unfortunate in their selections. We are not in possession of many experiments which have been made here with this breed. It has been said that in Mr. Cushing's trial of the Ayrshires at Watertown, Mass., they proved no better than the best "native" cows. Mr. C., however, purchased the very best cows which could be obtained to put on trial with the Ayrshires. We have never seen any account of the amount of milk yielded by the "natives;" but in Mr. Colman's Fourth Report on the Agriculture of Massachusetts, a statement is given in regard to the quantity given by the four Ayrshires for several months. The account for one of them is carried through a year, (the year 1837,) and it appears that she yielded 7,728 lbs., or 772 galls.—an average of eight quarts and a third per day through the year. Is there any evidence that any of his "natives" equalled this?

We are not aware that any account was kept of the amount of food consumed by Mr. Cushing's cows; but as the native cows were in general considerably largest, and not calculated from their form to live on less in proportion to their size than the Ayrshires, is it not fair to infer that the expense of keeping was in favor of the latter? And this circumstance might have rendered the *profit* of the Ayrshires greater than that of the natives, though they might not have afforded a larger quantity of milk.

But we know of one instance, where a bull from Mr. Cushing's herd, which was taken into one of our best grazing and dairy districts, has been the means of greatly improving the stock for dairy purposes. We allude to the Ayrshire bull owned by Mr. Chapman, of Middlebury, Vt.

The Massachusetts Society for promoting Agriculture have made several importations of Ayrshires. The first consisting of three cows and a bull in 1837. The last of four cows and a bull in 1845. The bull first imported was kept in different seasons in Berkshire, Hampshire, and Hampden counties, and the testimony of many persons with whom we have conversed in regard to the subject is, that the infusion of the Ayrshire blood from this bull, decidedly improved the dairy qualities of the stock in the various districts were he was kept.

Mr. Phinney found that an Ayrshire cow, (one of the three first imported by the Mass. Society in 1837,) put on trial with "the best native cow selected from a lot of twenty," made a pound and a half more butter in a week, than the "native"—both being fed alike.

Besides the importations of Ayrshires into Massachusetts, they have been introduced at various times into Connecticut, New-York, New Jersey, Maryland, and Virginia, and the accounts we hear are generally favorable to them as *milch cows*.

Our own conclusion is, from what we have seen of the various breeds of cattle, that if we wished to obtain a stock for the production of the greatest quantity of butter in proportion to the cost of keep or the food consumed, we should make one trial, at least, with a selection from the Ayrshires.

Are Showers increased by Forests?—The editor of the Southern Cultivator states that the size of streams and rivers is considerably diminished by the destruction of forests in clearing up new countries. He states as the reason, that it "is known greatly to lessen *the fall of rain* in the region thus treated!" What effect a growth of trees can have upon the rain clouds 2 or 3 miles above, as they are swept over the country by the winds, that would not be equally produced by a field of clover, or of corn, may be difficult to decide; would it not be more reasonable to attribute the diminution in streams to the evaporation of rains after they have fallen, in the open sunshine, or to their absorption by the cultivated mellow soil; which the hard earth and dense shade of forests would not so readily favor?

Waste of Manure.—The Farmers' Magazine states that it is a well ascertained fact, that in the single portion of Regent street, between the Quadrant and Oxford street, three loads of manure are dropt every day, or more than a thousand loads per annum; and the amount washed through the different sewers from the city of London into the Thames is 725 tons a year. Other cities, on the continent, by providing means for securing such waste, make the sale of manure from the cesspools a source of revenue.

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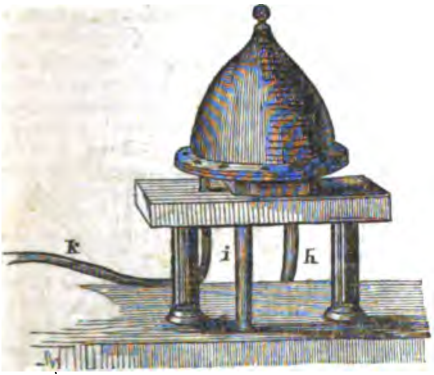
* Youatt's Treatise on British Cattle—page 130.

ELLSWORTH'S SYPHON PUMP OR RAM.

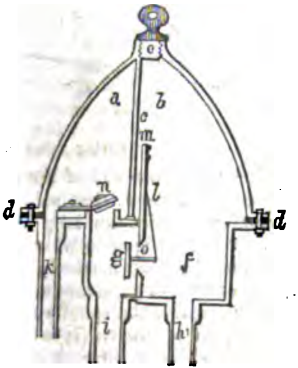
Editors of the Cultivator—Many of your subscribers who noticed, more than two years since, an article in the Cultivator, over my signature, giving some account of the successful performance of an apparatus for elevating water, by means of a syphon, will probably, at this late day, be more surprised to meet with the following description of it, than they were at the first announcement of such an invention. The thing, however, is not as dead as they have reason to suppose it; but, on the contrary, has been in successful, though not extensive use, here and elsewhere, ever since the date of that communication. But in the interim it has received some practical improvements, and, for reasons which it is unnecessary to detail here, I have hitherto (with one recent exception) abstained entirely from publishing any description of it.

In principle, my machine consists of a syphon, combined with the well known "hydraulic ram." Previous to the date of my former communication to the Cultivator, I did not know that any such combination had been attempted; but subsequently two analogous inventions were brought to my notice, both of which, however, were essentially different from my own in construction, and are obviously useless as practical machines, the design of the inventors having been little else than to accomplish the feat of constructing a syphon that should discharge water at the curve.

The subjoined figures and description, will give some idea of the construction and appearance of my apparatus:



Syphon Pump—Fig. 14.



Section of Syphon Pump—Fig. 15.

In the annexed sectional drawing, *a, b,* is a hollow dome, or cap, the cavity of which is divided into two distinct chambers, by the partition *c.* This dome is fastened by a flanged joint to the circular plate *d, d.* The central portion of *d, d,* is sunk into the form of a box, or chest *g, f;* that part of which, lying under chamber *a,* is roofed over by *d, d;* but communicates with *a,* by a valve *n,* opening upwards. That portion of the chest marked *g,* is still farther enclosed by an upright plate *m,* held to its place by a couple of wedges, not shown in the section. This plate has an orifice at *o,* furnished with a valve opening towards *g;* which is suspended on the spring *l.* From *f,* passes *k,* the long leg of the syphon, and from *g, i,* the short leg. In operating the machine, *i,* and *h,* are first filled with water through the screw-plug *e;* as soon as the syphon is free to act, a current commences in the direction *i, o, f, h.* This current, acting on the valve at *g,* soon overcomes the elasticity of the spring *l,* and the orifice *o,* is suddenly closed. The water in *i,* then acts with a momentum due to its weight, and upward velocity, upon the valve *n,* and a quantity of water escapes into *a,* which, when the impulse in *i,* is exhausted, is prevented from returning by the closing of *n.* The moment that *n* closes, a slight recoil of the water in *i,* allows *l* to throw open the valve *g,* and the above process is then repeated. The water which accumulates in *a,* is conducted by a curved pipe attached at *k,* to any station above the machine where it may be wanted for use. The chambers *a* and *b,* never fill with water; they confine, each, a quantity of air, which, by its elasticity, equalizes the currents through *k* and *h.* These air chambers are both indispensable to the perfect action of the machine; and if *k* and *h* are of considerable length, it will not operate at all if they are filled with water. The air in *a,* is obviously under more or less pressure in proportion to the height to which the water is elevated through *k;* while owing to the same cause operating in an opposite manner at *h,* the air in *b,* is rarified, or under less than the pressure of the atmosphere. As water under pressure, in contact with air, has the property of absorbing more or less of it, and then liberating it when the pressure is removed, the air in *a,* has a tendency to diminish, and that in *b,* to increase in quantity; but the position of the valves in this machine is such, that, when it is in action, *a,* is constantly replenished from the overplus in *b:* for the recoiling movement in *i,* above-mentioned, which allows valve *g,* to open, draws in at the same moment a few bubbles of air, from *b. f,* at *o,* which air lodges in the cavity under *n,* and is driven at the next pulsation into chamber *a.*

Persons have often attempted, by a syphon, to convey water over elevated ground, to some situation below the fountain head; but have been troubled, and often compelled to abandon the plan, by an accumulation of air in the more elevated portions of the pipe, which, in the course of a few days, has cut off the stream entirely, and rendered it necessary to refill the pipe. This is owing either to a want of sufficient fall between the level of supply and the point of discharge, or to some obstruction of the pipe, either of which causes acts by checking the current through the pipe to that degree, that the air, liberated from the water, (owing to the diminished pressure to which the water is subjected in the upper part of the syphon,) remains and accumulates in the pipe. The only remedy is to obtain more fall, or give the pipe a freer aperture, until the current has sufficient velocity to carry the air through. A velocity of between one foot and eighteen inches per second, is ordinarily sufficient to accomplish this.

The quantity of water which the machine consumes, may be, to a considerable extent, regulated by a small crank, the axle of which enters at right angles to the plane of the above section, just behind valve *g.* This crank, when turned, gives the valve more or less play, and may if desired, be made to close it, and stop its action entirely. When the machine overdraws its supply, and stops from that cause, the syphon pipes do not empty themselves of water, (as would be the case with an ordinary syphon,) but the first few bubbles of air which enter the short leg of the syphon, break by their elasticity, the continuity of the battering column, the different portions of which immediately acquire independent movements, which mutually destroy each other, until the valves cease their motion, and the water throughout the apparatus comes to a state of rest.

At the foot of the short leg of the syphon, is a short plug fitted loosely to the calibre of the pipe, which may be drawn up a little distance into, or thrust down out of the pipe, by means of a rod attached to it. This plug is drawn up into the pipe, for the purpose of closing it, when the syphon is filled. It is also used for starting the machine, at any time, when the pipes are filled, and the water in them at rest; this is done by drawing the plug up, and thrusting it down out of the pipe pretty quickly. The downward draught of the plug, by removing the pressure of the atmosphere for a moment from the column of water in the short leg, allows the spring on the main-valve to throw it open, and the plug, passing immediately out of the pipe, allows the machine to commence its operation.

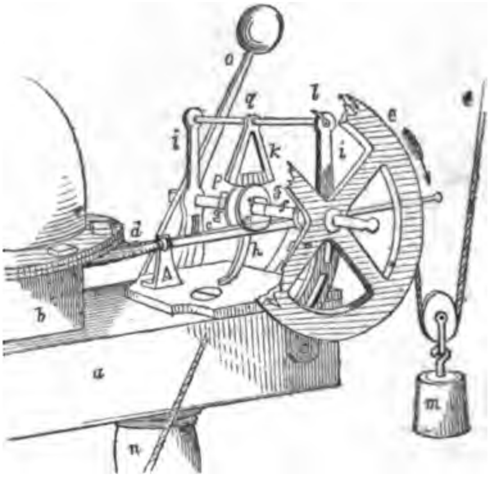
The advantages which this syphon ram possesses over the ordinary hydraulic ram, are, that it can be applied in many situations, where, from the nature of the location, the common ram could not be used, as, for instance, where the source of supply is a well, or where, as is often the case in mills and factories, a pipe may be passed down into a place to obtain the requisite fall, in which, from want of room, the ordinary ram could not be placed; that it is more commodiously situated for repair or regulation, inasmuch as it stands high and dry above, instead of below, the head of water which operates it; and that when water is required to be raised to a considerable height, the elevation of the working parts of the ram upon the summit of the syphon, divides the load to be lifted, relieving the strain upon the air vessel, and making the valves less violent in their action, and consequently more durable.

To make the machine operate well, not less than five feet fall, below the level of the supply, should be obtained, and more than twenty is not desirable. The fall may be obtained within the distance of twenty rods, or twenty feet, indifferently, and the pipes may be laid at any angle, to suit circumstances.

The sizes of the syphon pipes required for elevating water for domestic purposes, are ordinarily between 5-8ths and 1¼ inches diameter, according to the amount of water to be elevated, the height to be overcome, the quantity of supply, &c. Machines between the sizes of 5-8ths and 1¼ inch syphon pipes, consume between 1 and 7 gallons of water per minute, and can be furnished, and ordinarily set up, exclusive of pipes, at prices ranging between $15 and $30. The expense of pipe will, of course, depend on the quantity and size required. In all cases, before erecting them, the following data should be ascertained, as nearly as practicable, viz: the quantity of supply; the amount of fall that can be obtained below the level of supply; the distance within which said fall can be obtained; if the supply is a well, its depth to the water and the bottom; the height to which the water must be elevated, and the quantity required.

The apparatus which I have in use at this place, is employed (as mentioned in my former communication) for elevating water for stock, from a well near the farm yard. It has now a small building, about 8 feet by 12, erected over it, which also covers the well, and contains a wooden cistern above the level of the ground, of the capacity of about ten hogsheads. The machine keeps this cistern filled with water, which may be at any time drawn through a key into a trough in the yard. The building is of wood, the frame of which is covered, inside as well as out, with matched boards, and the spacings thus formed, are filled with cut straw. This precaution (together with those of having two windows facing the south, and leaving, during the winter, the mouth of the well uncovered, so that the warmth of the water may be communicated to the air in the building) gives perfect security from the effects of frost, even in the severest weather. The well from which the water is drawn is not as favorable as many others. The supply of water never fails, but it is very variable. After the wet seasons of the spring and fall, it has furnished sufficient water to keep the machine in constant action, consuming about three gallons of water per minute for a week or two at a time; but in midsummer, the deficiency is such, that it does not operate more than three hours in the twenty-four. This irregularity renders it necessary to start the machine at longer or shorter intervals, as the supply in the well accumulates and is exhausted. The inconvenience of this frequent, although momentary attention, might in a measure be obviated by relaying the syphon with a smaller pipe; but in the winter it is desirable to make use of the whole supply, which pipes and an apparatus small enough to continue in constant action, at all seasons, would not do. The whole difficulty is, however, overcome by a fixture designed for the purpose, which was first attached to the pump last August, and has been in successful use ever since. Its object is to set the pump running, whenever, after an interval of rest, the water in the well shall have risen to a given height. By accomplishing this, the whole supply of the well is used, whatever it may be, and the pump requires no attention.

The construction of this attachment is shown in the adjacent drawing, fig. 16:



Starting Attachment—Fig. 16.

Where *a*, is one end of the frame on which the pump is erected, and *b*, that side of the pump which communicates with the long leg of the syphon; *c*, is a small rod or spindle which passes through the outer end of the chest marked *f*, in fig. 15, on a line with the stem of valve *g*, consequently when pressed horizontally inward, the spindle acts against the stem of the valve and opens it. It is obviously necessary that this rod should pass through into the pump by a perfectly air-tight joint; it is also necessary that when pressed from *c*, towards *d*, (fig. 16) for the purpose of opening the valve, it should have a tendency to return quickly out of the way of the action of the valve. These requisites are obtained as follows: a spiral spring of brass wire, about three inches in length, is wound about the spindle at *d*; one end of this spring is fastened to a short tube, through which the spindle enters the pump, and the other extremity to the spindle near *d*. This spring gives the spindle the necessary outward movement, when pressed inward and released, and the admission of air into the pump around the spindle, is entirely prevented, by having the spiral spring enclosed by a thin tube of metallic gum-elastic. The outer end of the spindle is supported by a guide, which holds it in a proper line for action. On each side of *a*, near its extremity, rise two standards, *i*, *i*, through which passes the shaft *f*, which carries, on its front end, the grooved wheel *e*, a portion of which is represented in the figure as broken away, to give a view of the parts beyond. On the middle of this shaft are two circular discs, *g*, *g*, half an inch apart, through which passes, parallel with the shaft, the key *p*. This key, when the wheel *e*, is revolved in the direction of the arrow, comes in contact with the upper end of a latch, *h*, on the spindle, and if the revolution of the wheel is continued, carries the spindle in the direction *c*, *d*, about half an inch, and then allows it to fly back; but if the wheel be revolved in the opposite direction, the key merely raises and drops the latch, without acting on the spindle.

Through the upper extremities of *i*, *i*, passes another shaft *q*, to which is fastened the pendulous weight *k*. On the front extremity of this shaft is a small spur, *l*, which, when *k* hangs at rest stands nearly horizontal, though with its point a little elevated. From the inner side of that part of the rim of *e*, which is represented as broken away, projects a small pin, which, when *e* is revolved in the direction of the arrow, comes under the point of the spur *l*, and throws the pendule *k* out, towards the pump, elevating it at right angles to the position shown in the drawing, before the pin passes over the spur; but when the wheel is revolved backwards, the position of the spur is such that the pin slides over it easily, tilting *k*, very slightly, in the opposite direction. Over the wheel *e*, passes a cord *n*, on one side of which is suspended the small weight *m*, and on the other a cylindrical float which hangs in the well. The weight of the float, when out of water, is a little greater than that of *m*, and the weight of *m* is sufficient, when not counterbalanced by the float, to carry the wheel *e* around, in spite of the resistance offered by the pendule *k*, and of the force necessary to operate the spindle, and open the valve.

Now let it be supposed that the pump has recently been in action, and emptied the well, and that the float attached to *n* has descended, until the weight *m* is at the position represented; and that the pin in the rim of *e*, is situated about opposite the upper broken spoke. The water rises until the lower end of the float is immersed an inch or two; *m* then begins to preponderate, and as the water continues rising, the wheel revolves in the direction of the arrow, until the pin in its rim comes under the point of the spur *l*. The weight of the pendule then arrests the movement of the wheel for a time, and the water in the well rises eight or ten inches upon the float, before the weight of *m* is sufficient to tilt *k* far enough to allow the pin to pass over the spur. When this happens the pendule loses its retaining power entirely, and *m*, being now but slightly counterbalanced, immediately gives the wheel a half revolution, which operates the spindle, opens the valve, and leaves the pump free to run, until stopped by the exhaustion of the supply of water. In the meantime the float descends, with the level of the water in the well, bringing the parts attached to it back to their original position; they are then ready for a repetition of their action, with the next rise of water.

Previous to the invention of this attachment for starting, I have attempted, once or twice, by simpler methods, to make a float set the machine in action, by operating the plug at the foot of the short leg of the syphon; but the mechanism, though simple, was clumsy, and not reliable. The present device, however, although it has an air of much greater complexity and delicacy, has shown that its movements may be anticipated with as much certainty as those of a well made clock for striking the hour at the proper time. And if a machine does its work perfectly, that fact is ample justification for the use of every mechanical arrangement, that conduces to the perfection of its action, which it may contain.

I do not, however, recommend this attachment as one that should frequently accompany the pump; and have not taken the trouble of writing the above description of it for the purpose of advertising it, or inviting the cavils of those mechanics who may be disposed to be critical on the subject of its general utility. That which I have in use at this place is the only specimen of it, and is daily accomplishing the sole purpose for which it was invented.

ERASTUS W. ELLSWORTH.
East Windsor Hill, Ct., Nov. 30th, 1847.

Domestic Economy, Recipes, &c.

KEEPING BEEF FRESH.—Combe says the *ribs* will keep longest, or five or six days in summer, the middle of the *loin* next, the *rump* next, the *round* next, and the brisket the worst, which will not keep longer than three days in summer.

INDELIBLE INK.—This may be made much cheaper than purchased, as follows: Two drachms of nitrate of silver, added to four drachms of a weak solution of tincture of galls. Another:—Nitrate of silver, one drachm, mixed with a solution of half an ounce of gum arabic in half a pint of pure rain water. Moisten the cloth previously with a strong solution of pearl, or salt of tartar, and iron it dry.

INCOMBUSTIBLE WHITE-WASH.—Pass fine freshly-slacked lime through a fine sieve, and to six quarts of the fine pulverized lime thus obtained, add one quart of the purest salt, and one gallon of water, and boil the mixture, and skim it clean. Then to every five gallons of this mixture, add 1 lb. of alum, ¼ lb. of copperas, and slowly add ¾ lb. potash, and 4 quarts fine sand. It adheres firmly to wood or brick.

FROST PROOF CEMENT.—Mix tar with sand; it gradually hardens, and as moisture cannot in the least degree penetrate it, it will never crack by frost. This was proved by the accidental upsetting of a tar barrel on a spot of sand—the cement thus accidentally formed, remaining impenetrably hard for years, although under the rain-water spout, and exposed to all weathers.

INK SPOTS, on mahogany, may be easily removed by rubbing them with wet blotting paper, and afterwards rubbing the spot with a dry cloth.

MALAGA RAISINS.—These are all made by merely drying the large white Muscatel grape, without the addition of any ingredient. They are all raised within 2 leagues of the southern Spanish coast, and do not succeed farther inland. The Lexica raisins, used for puddings, are however, produced in the interior. They are gathered when ripe, and spread out upon the ground to dry, which usually requires 15 days, during which time they are never removed, although the drying process is retarded by the dews, which difficulty would doubtless be removed by the use of portable awnings.

TOBACCO.—Kentucky raises more than any other State.

FINE STOCK AND POULTRY OF J. B. HATHAWAY, Esq.

MESSRS. EDITORS—While on a short excursion into Canada some time since, I called to see the stock, poultry, &c. of Mr. J. B. HATHAWAY, about a mile out from St. Catharines. He is the owner of the celebrated blood stallion "Mercey," that was purchased by Com. Stockton at the sale of the stud belonging to the late William IV. He has also some fine blood mares, which, with fine stock of other kinds, renders his place worthy of a visit from every agriculturist.—In the poultry line he seems to be quite an amateur, and has gathered around him a great number of varieties. Of these I will give you a short description.

Of *Geese*, I saw in his yard, the *Chinese*, *Poland*, *Wild*, *Bremen* and *Irish* varieties. The *Chinese* have been described and figured in your pages, and from my experience with them in my own yard, and what I have seen of them in other places, I think for beauty and other qualities, they answer in full the description you have given of them. The *Poland*, have many points of resemblance to the Chinese, and are probably only a cross from them; but are coarser in the neck, larger bodied, and much less graceful in their motions. The *Wild* or *Canada* Goose, has been fully described in your pages; and although on the score of profit not much can be said in their favor, as they do not breed till their 3d year, yet they are certainly a great ornament in a poultry yard. As the Swan cannot be kept domesticated in our climate during the winter, requiring as she does open or unfrozen water the whole time, a very good substitute is found in the Wild and Chinese Geese. Among the ornamental varieties these stand unrivalled.

The *Bremen* geese, in Mr. H's yard, are very large, stately in their appearance, and perfectly white, both male and female; and when feathers and carcass are the main objects desired, these are a valuable variety to keep.

The *Irish* goose, is a large and coarse bird, with legs like a mill post, but I could discover nothing particularly desirable in them unless for the purpose of crossing with the common varieties. One of these is figured and described in the *London Illustrated News* of last July, as having taken a prize at the show of the Zoological Gardens; there is also figured a goose from the River Orinoco. S. A., having a small plump body with very long legs, like those of a Stork. Of this last variety I have heard of no specimen as yet in the United States.

Of *Ducks* kept by Mr. H., I saw fine specimens of *Muscovy*, and of others more common; of the splendid *white Topknots*. the *Wild black duck* domesticated, and the *Red-headed, capped Wood duck*. This last is very small, but surpassingly beautiful, and is the first instance within my knowledge of its being domesticated.*

Mr. H. keeps a number of *Golden Pheasants*, both male and female; between them and the various breeds of barn yard fowls, has a great variety of crosses; some of which, particularly the Golden Topknots, which are a cross between the Pheasant and the Poland fowl, are a great ornament in a poultry yard. Of this variety I have bred a good many myself the last two or three years, and were I to keep only one variety, should rather be inclined to give the preference to these above all others. Their golden and variegated plumage, large brilliant black eyes, and liveliness of motion, invariably arrest the attention of strangers; while in the number of eggs they produce, they are equal to any other kind.

Besides the poultry varieties already enumerated, Mr. H. keeps Peacocks, Guinea-hens, wild Turkeys domesticated, &c., &c.; and I observed a pair of Sandhill *Cranes* from Illinois, following him around his premises. These were perfectly at home among the other poultry, and when at rest, usually drew one leg up under their body, presenting quite a unique appearance. Mr. H. has also in a process of domestication with his other poultry, a lot of *Prairie Grouse*, or "Prairie Hens" from Illinois. Overhead, and basking in the sun, were nearly all the varieties of domestic pigeons; while the group was filled out by a troop of deer bounding over the yards, and an enormous Black bear chained in a corner to keep sentry over the whole.

Having a small pond of water near his house, Mr. H. has erected a line of poultry sheds on the north side facing the South, with divisions for different varieties, feeding boxes, &c.; and here, within an enclosure of perhaps two acres, all his variety of poultry live in harmony, and are a source of great pleasure to their owner and his family. And why should not every farmer add something of this kind to his other stock to render home more attractive? Why not multiply forms of beauty and sources of innocent pleasure, when they can be so cheaply obtained? A very little additional outlay would enable almost any one to increase the beauty and attraction of his place, so that his children would feel, that "there is no place like home."

The Agricultural Society of Niagara district, in which St. Catharines is situated, have a show and fair twice each year, spring and fall; the former of which is made the occasion of the sale and interchange of stock, and the hiring of farm laborers. In their list of premiums, I observed that the Society offered the premiums to the *best* horses, cattle, &c. exhibited, without designating any particular breeds. This probably has some tendency to repress those jealousies, which are apt to arise sometimes among farmers, when foreign stock is particularly commended.

The land all through the Niagara District, extending from the river to Hamilton, is in a fine state of cultivation, and bears prices varying from $20, to $60 per acre, according to improvements, proximity to villages, &c. Agricultural papers are extensively circulated among the more intelligent farmers, and their good effects are seen and acknowledged. One thing I could not observe but with high pleasure,—which was more common among the English and Scotch farmers,—the building of their houses some distance back from the road, and surrounding them with shade trees. This was an evidence of good taste, and an ornament of no mean value in the rural landscape. When will *our* farmers learn to appreciate such things?

Buffalo, Dec. 1847. H. A. PARSONS.

RIPENING OF WHEAT.—A writer in England, for the Genesee Farmer, says that from the cool weather and occasional showers, wheat requires there twice the time to ripen that it does in western New-York, which he thinks is a reason the grain fills so much better than here.

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* The wood-duck has been frequently domesticated. We have seen a beautiful group of them in the Bowling Green fountain, New-York.—EDS.

SKETCHES OF MASSACHUSETTS FARMING.*

At South-Deerfield we called on Mr. T. S. Sargent, who, besides showing us the "lay of the land" in his neighborhood, was so kind as to convey us, by way of "old" Deerfield, to Greenfield.

About two miles south of Greenfield, is the farm formerly owned by Rev. H. Colman, and where he for several years resided. The readers of the early volumes of the *Cultivator*, the *Genesee Farmer*, and the *New England Farmer*, will recollect his interesting communications, dated at "Meadow Banks." It is a beautiful place—we scarcely know of one which, as a residence, we should think preferable. The house is situated at the base of a handsomely rounded hill, on an elevated shelf of land, overlooking to a large extent the fertile alluvial grounds on the Deerfield river. The farm, when Mr. Colman owned it, consisted of 150 acres, but it has been divided, and the homestead at present only comprises 50 acres. It is owned by Mr. David Wait.

The meadows here are generally overflowed in the spring season, and a deposite is left by the water which keeps up the richness of the soil. Large crops of Indian corn and grass are here obtained. Mr. Wait informed us that three tons of hay are usually taken per acre, and he had got nearly six tons from an acre, at two cuttings, in one season. In good seasons, with proper cultivation, he thinks fifty bushels Indian corn may readily be obtained per acre, without manure.

A little below the place just mentioned, we called at the farm of Mr. Samuel Child. He has kept for several years the Durham bull *Northumberland*, bred by E. P. Prentice, Esq. This animal has been of great benefit to the vicinity, and might have been still more useful if the farmers had properly appreciated him. We were told by many persons that his progeny have proved very valuable. They are thrifty, and the heifers are excellent for the dairy. We saw several calves and some other young stock that were very promising. Mr. C. has a good farm, but we were so pressed for time that we could not go over it.

Deerfield is an old town. Its settlement was commenced by the English 177 years ago. The settlers were undoubtedly attracted by the large extent of rich alluvial land here, on which the Indians had, from time immemorial, raised large quantities of corn. Capt. David Hoyt estimates that there is not less than 5,000 acres of rich intervale within the limits of the town, on Deerfield river.

In answer to some inquiries, we have received a letter from Gen. Epaphras Hoyt—a very intelligent gentleman, upwards of eighty years of age—from which we make the following interesting extract:

"Our town [Deerfield] was first settled by the white people 1670, and at that period I believe the intervale was cultivated by the Pocumtuck Indians, and considerable quantities of corn raised. At the close of the *Pequot war* in Connecticut, the English were suffering for want of bread, and in 1637, agents were sent from Hartford and other towns on the river, to the Indians at Potcumtuck [Deerfield] to procure Indian corn, and fifty loaded canoes, conducted by the Indians, descended the Connecticut with that article, which relieved the people from their distress.

"How long our intervale has been cultivated is uncertain—probably for centuries before it was settled by the English. Manure is now required on those parts not flowed by the river; and as the floods are now less frequent than formerly, manure is required in increased quantities."

The settlers here soon became prosperous, and the neighborhood was noted for its agricultural productions at an early day. But it was with great reluctance that the Indians yielded the possession of this fine region which, to them, was almost a paradise, and designed, as they believed, by the Great Spirit especially for his Red children. Their enmity was manifested by frequent and bloody attacks on the whites whom they regarded as usurpers. The town was several times destroyed, and most of the inhabitants put to death or made captive. A monument at South Deerfield commemorates an event which occurred in 1675. The Indians made a descent upon the town, and burned nearly all the houses. The settlers had raised considerable quantities of grain, which was deposited in stacks. This, the neighboring inhabitants, deemed it advisable to secure, and a detachment of soldiers and teamsters, eighty-six in all, was sent with teams to convey it to Hadley. On their return with the grain, they were ambuscaded by the Indians, and the commander, Capt. Lathrop and seventy-six men, slain. The monument was erected, with appropriate ceremonies, in 1838. A small stream which runs near it, received the name of "*Bloody Brook*," from its waters having been literally crimsoned by the blood of those who fell in this sanguinary conflict.

A still more disastrous calamity befel the town on the 29th of February, 1704. It was suddenly attacked by a party of French and Indians from Canada; every dwelling but one was reduced to ashes, many of the inhabitants put to death, and the remainder (except a few who escaped) carried away captives—112 of the latter being taken to Canada. The house which escaped the conflagration, commonly known as the "old Indian house," is still standing, and is occupied as a dwelling. It was erected twenty years before the event referred to, and is, therefore, 163 years old at the present time. It is built of wood—the frame oak, and still in quite a sound condition. In their attack, the Indians cut a hole through the outer door, which still remains as it was, and the marks of the hatchet show as plainly round the edges, as though they had been made but a short time since. The enemy discharged their guns into the house through the door and windows, and in one of the rooms, several bullets are still visible in the timbers. The attack was in the night and entirely unexpected by the inhabitants, who were quietly sleeping in their beds. Such was the case with the Sheldon family, who resided in the house; and one of the bullets now to be seen in the wall, killed Mrs. S., passing through her head, just as she started from her pillow to learn the cause of the outbreak.

The house, being a large one, was preserved by the marauding party to store their plunder, and shelter themselves till they were ready to take their departure. It is justly regarded as an interesting monument of the dire event of which we have spoken. For the last hundred years it has been in the possession of the Hoyt family, and our venerable friend, from whose letter we have given an extract, we are informed was born here, in 1765.* We are much pleased to learn, that measures have been taken by the citizens of Deerfield and vicinity, to preserve the old house; and by making it the repository for Indian antiquities, and relics connected with the history of the place, render it still more an object of interest than it has hitherto been.

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* Continued from our December number.

* A more detailed account of the tragic scenes connected with the early history of this neighborhood, will be found in the histories of Massachusetts relating to this period.

In Deerfield as well as in several towns in this vicinity, there has been of late years considerable quantities of broom-corn produced. The value of the brooms manufactured from this article in Deerfield, was not long since estimated at $10,990 per annum.

We had but little time to view the country in the neighborhood of Northampton, as we only arrived there the afternoon previous to the cattle show, and the weather happened to be unfavorable. We called on **Wm. Clark**, Esq., who, besides being considerably engaged in agriculture and horticulture, is carrying on a large paper manufactory. He showed us some of the finest pears and grapes that we have seen. Mr. C. has been greatly instrumental in encouraging improvement in husbandry. He originated, we believe, a plan of seeding land to grass, which has been, with good success, considerably adopted. Fields occupied with Indian corn are made smooth at the last working, (no hills left,) and grass seed sown, and when the corn is harvested it is cut close to the ground with a hoe. The grass gives a good crop the next season.

Mr. **Henry Strong** was so kind as to take us in his carriage and show us a portion of the large body of intervale here. He estimates that there is not less than 7,000 acres of this kind of land in this town. Most of it is very productive. The lots are not usually divided by fences—stakes only marking the lines between the various owners. Numerous roads or avenues are left, so that every lot is readily accessible; and a ride through these beautiful grounds, loaded with the richest crops of various kinds, is one of the most delightful that can be imagined.

A little below Northampton, the river passes between two mountains—Mount Holyoke on the east, and Mount Tom on the west; and at some former period, there appears to have been a connecting ridge between the two elevations, which has been worn away as the river deepened its channel. The barrier to the current which existed here, is supposed to have formed a lake above the mountains, and occasioned the deposite of the broad alluvion which we have described. The river until lately, made a remarkable bend at this place, called the "ox-bow." The distance round this singular turn was between three and four miles, but by cutting across a neck of land, only about twenty rods in width, a comparatively straight current was given to the water, and the old channel is filling up, which will afford many acres of excellent land.

Mr. S. H. **Bates**, son of the late Hon. **Isaac C. Bates**, has a farm of nearly two hundred acres, most of which is excellent land. He was at the time of our visit, engaged in removing and repairing his buildings, some of which had become old and out of order. He and Mr. **Strong** purchased a Hereford yearling bull of Mr. **Sotham** last spring, which bids fair to make a first-rate animal. We have before mentioned[*] that the Hereford bull sent to this country upwards of twenty years ago by Admiral **Coffin**, was kept here for several years.

The village of Northampton has been long and justly celebrated as one of the pleasantest in New England. There are many neat and tasteful residences, and they have generally an agreeable rural air. The "Round Hill School," once so popular, was located here. A "Hydropathic Hospital" has taken its place. We passed through the grounds belonging to the establishment. The site overlooks the village, and commands besides a view of the neighboring towns, Amherst, Hadley, &c., embracing extensive landscape scenery, which for beauty and loveliness can hardly be surpassed.

Farmers Clubs.—Besides a state agricultural society and several county societies, there are in Massachusetts many neighborhood associations or clubs, whose object is improvement in rural affairs. Most of them are sustained with a good deal of spirit, and their general usefulness is obvious. In Conway—a town located among the hills of Franklin county—there is a flourishing society of this kind. The members hold an annual exhibition of live-stock, and agricultural and household products. The various crops are examined while standing in the field, by committees chosen for the purpose. The club has been in existence for several years, and its favorable effects are seen in the various departments of farming; animals have been improved, the yield of crops augmented,[*] products of household manufacture increased, and their quality improved, and a liberal and enterprising spirit generally infused.

Amherst, in Hampshire county, has a similar association. Their show, held at Amherst in November last, is spoken of as one of much interest—a very large number of people having been called together. Addresses were delivered by President **Hitchcock**, of Amherst College, and others.

Comparative advantages of this Section.—Ever since the first settlement of the country, the Connecticut valley has been celebrated for its beauty and fertility, and from what we have seen, we think it probable that, taking into consideration the character of the soil, the ease with which it may be worked, the variety of productions that may be cultivated and which find a ready sale at the highest prices—there is no part of the country which possesses greater advantages than this. Add to this the healthfulness of the climate, the excellence of its social and civil institutions, the beauty of its scenery, its means of easy communication, and other advantages, and where can be found a more agreeable or desirable region?

Farming in Turkey.

Dr. Davis of South Corolina, at the solicitation of the Turkish government, has gone to that country, to introduce modern improvements in agriculture. He found the only plow used in Turkey, a log, elevated at one end on two wheels, shod with iron at the lower extremity. Wheat is cut with grass scythes, raked up, and then trodden out by horses on the ground. It is cleaned by throwing it up in the wind. When ground, there is no separation of bran and flour.

There is usually no frost till January.

Under the improved culture given by Dr. Davis, the cotton crop is found to do better than in the Southern States of the Union.

Indian corn was formerly sown broadcast by the Turks, and received no cultivation. The ill-success of such culture may be easily guessed. Planted in rows, and cultivated with the one-horse plow, with which the Turks are delighted, it promises to succeed finely.

Subsoiling.—The Mark Lane Express notices improvements made on the farm of Lord Stairs, in Wigtonshire. One part was drained, subsoiled, limed, and thoroughly pulverized, and then produced forty bushels of wheat to the acre, where only twelve were raised before.

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[*] Cultivator for 1847, pp. 41, 42.

[*] For a notice of the crops of Indian corn raised by members of this Club, see Mr. Clary's remarks on the discussion in relation to the "Profits of Farming," at Boston, published in our last volume, page 296.

REMARKS ON BREEDING HORSES—No. II.

EDITORS OF THE CULTIVATOR—In a previous article I insisted that each person setting out to breed horses ought, in the first place, to determine which of the various species he will produce. I intimated that every breeder should aim to produce the horses most approved in our city markets, because these command the highest prices. I also maintained that in breeding carriage horses, especially, thorough-bred stallions, of the staunchest character, should in all cases be employed. My reasons for this opinion are various. It is sufficient here to say, however, that in my judgment, from these alone can be obtained, *with any reasonable degree of certainty* the peculiar style of horse most approved for that department of service. A horse uniting force and spirit with docility and good temper—size and strength with gloss of hair and symmetry of form, and a proud, lofty carriage with that peculiarly graceful and gliding step that can seldom be obtained without "a strain of gentle blood." I also, in my former article made some distinction between a *staunch* thorough-bred, and a mere race horse; I intimated that pedigree, however *true or high*, is not the only requisite. *Substance* is indispensable. This is indicated by a full round carcase—a deep flank—a wide loin, short between joints, a heavy flat bone below the knee, and a restless, resolute style of action.

Admit it all, perhaps the reader will say, but where shall we find such an one? This, I confess, is not an *easy question to answer*; and perhaps indicates the *strongest objection* to my theory. I freely admit that among *all* the stallions that I have ever seen, I have not found one that fully met my standard, in every particular; still I have seen many that approximated it sufficiently for all practical purposes, and among these I will name the imported horse "Consternation," that obtained the first premium of the N. Y. State Agricultural Society, at its fair held in Utica in the month of September, 1845. This horse was imported, and is owned by C. T. Albott, Esq., who resides near Rome, in Oneida county, N. Y. He lacks that majesty and stateliness of figure, that I have described—and a little too, of that force and impatience that I so much admire in a stallion. But on the other hand, he has remarkable compactness, and a development of bone and muscle equal to any thorough-bred horse I ever saw. He is short-legged too, and has a very vigorous and hardy appearance. On the whole, I am inclined to think his stock will prove equal to that of any horse in our country. I am very glad to hear that the prejudices at first existing, among the farmers in the neighborhood of Rome, against this horse, on account of his thorough-breeding, are fast disappearing as his colts begin to develop themselves. I am very glad also to know that Mr. Albott has recently purchased a mare that he thinks every way worthy of "Consternation," from which he expects to breed elegant carriage horses.—Knowing as I do, very intimately, the qualities of the mare, I venture to predict for him a degree of success quite equal to his anticipations.

In addition to "Consternation," there is "Pryor" also; for whom we are indebted to H. S. Randall, Esq. at whose solicitation he was sent to Cortland by his owner, Mr. Thompson of Maryland. He is now owned by a company of gentlemen at a place called Edmeston Centre, in Otsego county. "Pryor," I have never seen, but judging from a filly sired by him, which I own, and from the concurrent testimony of many gentlemen who have seen him, I cannot doubt that he deserves all the patronage his owners may desire for him.

"Tornado" is another fine horse. He is owned by Mr. Long of Washington county, and received the first premium at the recent fair of the N.Y. State Agricultural Society at Saratoga. In some respects he is decidedly the noblest horse I ever saw. His attitudes are superb—his body, neck, head, eye and ear are admirable—he fails sadly, however, in his fore leg below the knees especially in the back sinews and pastern—his color also is too light; indicating to me a slight delicacy of constitution, or a little over-fineness of breeding. Still, he is truly a fine horse. Besides these, I have heard flattering accounts of "Hornblower," near Batavia; also, of his half-brother "Fiddler," now in Orange county. Yet after all, it must be admitted that first-rate, thorough-bred horses are so scarce in our country, that it is difficult and expensive to procure their services. There is no reason why this should be so, except that hitherto they have not been properly appreciated by our farmers. There are but few men in our country who make the science of breeding a study—very few, even who have much pride about it.—Most farmers content themselves with the horse nearest to them, provided he is of good size and color, and his owner will insure a foal for three or five dollars. No wonder therefore, that "dunghills" should be so plenty and thorough-breds so scarce.

In many sections, however, this indifference is passing away. Farmers are beginning to see that it is more profitable to raise the *very best* horses; though the first expenditure be double—or treble even. That the most profitable horse to breed from *is the one that offers the greatest certainty of producing a first rate foal every year*, though his services may cost ten dollars instead of three. I am confident that, as this opinion prevails, thorough-breds will multiply, for there really is but little certainty in breeding from any other than a thorough-bred stallion.

I am well aware that there is a prejudice against thorough-breds to be overcome. This prejudice has arisen, partly from the false pretensions to thorough-breeding set up by many that are not more than a quarter or one-eighth in the blood. But much more from the fact, that the thorough-breds heretofore introduced into our country have been quite unworthy representatives of their species—being, for the most part, little, gaunt, spindle-legged animals, that in consequence of some defect of constitution, or over-fineness of breeding, have broken down in training, and been sold for a song. Farmers do not generally know the fact, that the genuine, old fashioned thorough-bred horse, possesses greater power of endurance, greater energy, and in proportion to his weight of body, a greater development of bone and muscle than any species of horse in existence.

But I have promised to say something about saddle horses, trotting horses, and draught horses.

A truly elegant and valuable saddle horse cannot be obtained without breeding him expressly for that purpose. He should be at least three-parts bred, *and should be used under the saddle exclusively*. But as the demand for these horses is not great, I can hardly commend them to the attention of breeders.

Trotting horses are in far greater demand, and always bring a high price. It is very profitable to breed them. They are of all shapes—all sizes—all species. Some have sprung from Canadian crosses; some from

Indian ponies; some from the wild herds of the prairies; some from the Messenger and Duroc families, and some from three-quarters, and seven-eighths, and even fully bred stallions. Still, they are not altogether chance productions. Some families are uniformly good trotters: and I think the true way of improving the trotting horse of our country, is to select the hardiest, fleetest mares of these families and send them to thorough-bred stallions. This will give the bottom so much needed. In a match of two or four miles a horse of bottom has greatly the advantage, over even a much fleeter competitor, that lacks it. The former keeps steadily on his gait, rather increasing his speed as he goes; the latter "breaks up on the back stretch," and continues to break at intervals, until his better winded competitor "mends the gap" and wins the heat. I have no doubt that high breeding, will in a few years, be considered as necessary for the trotter as for the runner. But my article is again too long. In my next I will notice the Norman and Morgan horses.

Respectfully, &c., J. B. B.

Syracuse, Jan. 22, 1848.

CULTURE OF THE POTATOE.

EDITORS OF THE CULTIVATOR—There have been a thousand and one attempts to explain the cause or causes of the potato rot, and as many remedies suggested, most of which, in whole or in part, appear to be unsatisfactory.

I am not about to theorise upon this subject, but shall simply deal in matters of fact, as they occur under my management of this crop *on my soil*, leaving the reader to judge for himself whether the same management would be attended with like success with him.

There is one system of management by which I have thus far never failed of raising fine, mealy and sound potatoes, that keep well the season round. I select a piece of green sward land, of sandy or gravelly soil, that has never been subjected to a course of manuring and cropping; (a piece of pasture land is best, and if it never bore a crop of potatoes it is still better;) and plant it as early as possible to potatoes *one year*, without manure. A table spoonful of plaster, or a handful of unleached ashes, or a mixture of both, put into the hill at planting time, will well repay the expense. It imparts considerable vigor to the growth of the crop in the fore part of the season, and also increases the yield somewhat. It will be observed that I do not prescribe this application in the shape of a nostrum, to prevent the rot, for it is my impression that applied or not applied, is all the same as to the soundness of the crop.

In digging them in the fall, I am careful to dig when the land is tolerably dry, and there is a prospect of fair sunshine. They are dug out of the ground in the forenoon, and lay scattered about to dry in the sun till two or three o'clock in the afternoon, so that no *moist* dirt shall adhere to them, for I find that potatoes put into the cellar in a damp state, are much more likely to rot than those which are put in dry. I also delay digging them as long as possible, but by no means so long as to encounter a hard freeze by which the potatoes are affected, for in that case they will surely rot. The bottom of my potato-bin is made of plank, raised up the thickness of slit work from the bottom of the cellar, and the sides of narrow pieces of boards, not quite tight together, which admits of a circulation of air on all sides. The bin should not be more than three or four feet wide for the same reason. Potatoes keep best in my cellar not to touch the bottom or the walls on the side, as dampness is imparted to them from both these causes. For this reason the back side and ends of the bin should be of boards as well as the front and bottom. Every clear, cool morning, until the freezing weather of winter sets in, the cellar doors are opened two or three hours for ventilation. A thing which should always be practiced where a considerable quantity of vegetables are stored away.

It is true that potatoes will not yield 4, 5, or 600 bushels to the acre, on land of moderate fertility, without manure; but I get 150 to 200 bushels of excellent quality, and by using care in gathering and storing them, they keep well through the season.

The first year that the potato rot made its appearance in this section, I planted three rows wide of potatoes around a cornfield of eight acres, for the purpose of turning the horse more conveniently in working among the corn. The field was a little broken in surface, and embraced several qualities of loam, some rather coarse gravelly spots, some more sandy, and some, through the hollows, rather compact and fine-grained. I had the curiosity to mark the result upon these three rows of potatoes through the season. The vines blasted and died off early in the season, where the rows encountered the compact and moist soil in the hollows, while those on the gravelly and sandy spots held green and thrifty, and in harvesting were found to yield more in quantity and better in quality, than in the hollows, and more fertile parts of the field. The result was entirely at variance with all my former experience in growing this crop. I had previously always selected such kind of soils as these rich and moist, but not wet, hollows, obtaining from them a large yield and good quality of potatoes.

Last spring I planted two bushels of my table potatoes in the kitchen garden, which had been heavily manured, partly by way of experiment, and partly because I had no particular use for the land. In digging them this fall I found, as I expected, not one quarter of them sound, while seed potatoes taken from the same bin, and planted on a piece of pasture land, without manure, where my main crop grew, gave me a return of perfectly sound potatoes. I leave your readers to draw their own conclusions, whether or not these two cases which I have given, go to substantiate the method of growing this crop which I have recommended.

F. HOLBROOK.

Brattleboro. Nov. 25, 1847.

TRANSMUTATION OF WHEAT.—The Ohio Cultivator says that a correspondent, who does not complain of his wheat turning to chess, says that it has been turning to timothy; and what is still more unaccountable, he has had much difficulty in preventing his *corn* and *potatoes* from turning to *weeds*. A writer in the same paper says when the growth of the wheat is good, the chess is stunted, small, and escapes notice; but when the wheat is killed, it stands out far and wide, and that he has counted 78 stalks of chess from one seed, showing an increase of 1560 fold.

BRILLIANT TOAST.—Among the toasts at the celebration of the Middlesex (Mass.) Agricultural Society, was the following: "*The mighty powers of mud.*"—"Some men profanely swear by it; we farmers more piously prefer to thrive by it."

HOT-AIR FURNACES AND AIR-TIGHT STOVES.

EDITORS CULTIVATOR—I have noticed the remarks in the Cultivator during the past year, by GEO. GEDDES and others, on the advantages of Hot-Air Furnaces. Having used one in my own house for the past seven or eight years, constructed in a manner precisely similar to those described, I can endorse with confidence all, or nearly all, that has been said in their favor. There are, however, some defects which should be known. These defects are not merely attached to poorly constructed ones, for mine was a good one with a large stove and eight drums, well put together so as not to smoke.

The advantages, as have been before stated, are chiefly, the facility with which large wood, four feet long, may be used without cutting or splitting; keeping up only one fire for several rooms; freedom from dirt and ashes, from stoves and fire-places; saving in room; freedom from cold currents through door-cracks, &c.; and uniform temperature day and night.

The disadvantages are, the furnace, unless in a very large cellar, so as to be entirely separated by partitions from the rest of the cellar, heats it too much, usually causing the speedy decay of apples, &c.; it occupies as much room below as it saves above stairs; the wood being heavy, but few women can lift it, and hence a man must be at hand; the fire being away, out of sight, is apt to be forgotten and neglected till too low; after standing and absorbing moisture during summer, the plaster and brick-work throw off an unpleasant and damp smell into the rooms for some days after the fire is first commenced in autumn; the cost, in no case, of a good furnace, can be much less than a hundred dollars. Not one of the least objections is the difficulty of regulating the heat properly in rapidly changing weather, as from cold to warm, from warm to cold, or from calm to windy. Large sticks six inches to a foot in diameter will be an hour or two in getting thoroughly on fire; and when once on fire, continue burning half a day or more. In the meantime there may be a considerable change in the weather, in which case the rooms may be greatly over-heated, or become too cold to be comfortable. It often happens that a fire is built up for the night, while the weather is calm; a fresh wind springing up in the night will rapidly diminish the heat of the rooms; or, if the weather is windy when the fire is made, and the wind then subsides, the heat soon becomes oppressive. It is found to require twice as much wood in a high wind, at 25 degrees, as in a calm at zero. Wind also changes the course of the ascending hot air in the pipes, warming those rooms chiefly which lie in a direction *from* the wind, often sweeping the air from the windward rooms down the hot-air pipes, and out of the air chamber through the feeding pipe. This is a serious inconvenience. It may indeed be obviated by properly adjusting the registers, and by two or three cold-air feeding pipes on opposite sides of the furnace, to be closed or opened as the case requires; or a new fire may be built of small wood, if the weather suddenly becomes windy; or, on the other hand, if it suddenly becomes calm or warmer, the fire may be smothered with ashes, or lessened by shutting the fire draft. But all these require much attention; more than farmers generally are willing to give; and would be a grievous tax on a housekeeper where no man is at hand.

Every establishment, therefore, which cannot keep an attentive hired man always at hand, should not be encumbered with a furnace. But in a large house, where such care can be constantly given, and where there are as many as five or six rooms to be constantly heated, a good furnace will be found altogether the most convenient mode. It is also just the thing for large schools, where many apartments are in daily use, obviating the care and interruption of replenishing fires in the separate rooms; or for hotels, and large public buildings generally.

For small houses, nearly all the advantages of the hot-air furnace are secured by the use of the best air-tight, self-regulating sheet iron stoves. The cost of two or three of these is much less than of a furnace; they are always at hand and easily fed; they consume less wood by nearly one-half, as I have amply proved by long experience with both; and they will maintain a fire as long during the night as a furnace. The very common objection to the furnace, that every part of the room is heated alike, and that every person whether thinly or warmly dressed, must endure the same heat; or those who have been all day riding in the cold can have no warmer fire than others, is wholly obviated by the air-tight stove. So rapidly may a room be heated with one of these, that five minutes are scarcely needed in any case; while the self-regulator, properly adjusted, will preserve an equable temperature for a long time. With an additional improvement—that of inserting a transparent plate of mica in the regulating valve, the light from the fire would be thrown into the room, and the advantage so much prized by many, of seeing the " cheerful blaze," would be at least partially attained.

With one of the larger sized air-tight stoves, (Race's $14 ones,) I am enabled to heat a family room and three adjacent sleeping apartments, more comfortably than I could formerly with a furnace; for which one cord of good wood will last about one month of average winter weather; and my fruit and vegetables now keep well in the cellar.

But air-tight stoves have their difficulties. These are two in number, namely—the sudden puffs of smoke or explosions; and the inconvenience of pipes choked with soot, or dripping with pyroligneous acid. The first never takes place except when the stove is closely shut. Impure carburetted hydrogen from the burning wood mixes with the air in the stove, and then taking fire causes the explosion. This is usually only a puff of smoke, but sometimes it has been sufficiently strong to lift the small cast iron plate which covers the hole in the top of the stove. The explosions may be obviated by adjusting the regulator so that it shall not entirely close, till the wood is half consumed. The carburetted hydrogen will not collect while a slight current of air is sweeping through the stove, and rarely except when the wood is in its early stages of combustion. The dripping of pyroligneous acid is prevented by reversing the joints of the pipe, those above being inserted into the next ones below, rendering it impossible for the liquid to escape. To prevent the pipe becoming soon choked with soot, nearly all should be perpendicular or nearly so, so that by knocking on its sides, the adhering soot may fall. One of my stoves was at first fitted with seven feet of horizontal pipe; but in five weeks it was perfectly choked with soot. The stove was then moved, and the pipe made vertical. By knocking down the soot once a fortnight, no difficulty from this source is now experienced. Where the draft is considerable, the soot does not so rapidly accumulate; hence in using another stove, less perfectly made, no inconvenience was found either from dripping or soot, for some months.

A self-regulating stove, made of Russia sheet-iron, will last, it is believed, under ordinary circumstances, not less than fifteen years. X.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Downing's Fruits and Fruit Trees,

WITH COLORED PLATES.

This is truly a splendid and valuable work. It contains seventy colored plates, with representations of eighty-six different varieties of fruit. *Seventeen* of these are apples; *twenty-four*, pears; *twenty*, cherries; *two*, apricots; *seventeen*, plums; *three*, peaches; *one*, raspberry; and *one* strawberry. They are the finest style of lithographic prints, colored by hand. In nearly all cases, they are remarkably accurate delineations of nature; and they have the excellence of being entirely free from the over-coloring which is so prevalent among illustrated works of the kind. Gorgeous daubings of the most brilliant paints, are infinitely inferior to the softened lights and shades of the skilful copier of nature. As paintings, however, they will not take the highest rank; neither indeed should they; for in that case it would be necessary to represent them in too strong a light, relieved by too heavy shades, to be well adapted to close viewing, as in a book held in the hand. The light and shade is mild, so that the true colors of the specimens are not obscured by heavy shadows.

There is much uniformity in the excellence of the coloring throughout the volume—the accuracy with which the peculiar shade of color, of nice distinctive tint of each variety is given, in most cases, is admirable; yet in the copy before us, we are particularly pleased with the figure of the Columbia, Lawrence's Favorite, and Duane's purple plums. the Bilboa and Marie Louise pears; and that of the Fastolff raspberry is extremely fine and natural, the soft pulpy juiciness of the berries being quite conspicuous. On the other hand, we should regard the figures of the Bloodgood and Bezi de la Motte pears, and Bullock's pippin, though good pictures, as of a greener hue than is usually found in the real specimens. The drawing of Baumann's May, appears to have been made from an immature specimen;—when fully ripe, this cherry is nearly black, and comparatively round and plump, the angles disappearing as it ripens. The Seckel pear hardly exhibits enough of the brownish russet which marks this variety. The Winter Nelis, also, we should think, should be more generally overspread with the russet streaks, found on the average of specimens.

In addition to the plates, this volume has all the outline figures, and all the corrections of the seventh common edition. The typography and binding are of the highest order; and the work taken altogether is unsurpassed. We should have been glad if the binder had relieved us from the necessity of so frequent a resort to the paper-knife.

Quince Stocks for Pears.

Much attention has been lately directed towards the use of the quince as stocks for the pear. The former opinion, of the extremely short duration of pear trees on the quince, seems to have been in part, founded in error. The late S. G. Perkins of Brookline, Mass., had perfectly healthy and productive trees, which had been transplanted more than twenty years. T. Rivers states that at the celebrated Chiswick Garden, England, there are trees twenty-five years old, which are "pictures of good health and fertility." And we are assured on good authority that in Germany there are healthy trees of far greater duration.

A great advantage in the use of the quince stock, is early productiveness, only two or three years being required from the time of grafting before the tree commences bearing. Another, is the little room they occupy, from the character of dwarfs which they assume, and they may be planted within ten feet of each other. Hence they are admirably adapted to limited gardens, where it is desired to cultivate for crops the intervening soil; for branching within a foot of the ground, and rising only eight or ten feet high, they shade the surface and exhaust the earth but slightly. They, however, need a rich soil and good cultivation, and are hence unfit for the grassy orchard, where such treatment is not given. And yet we can by no means say that they are not in some localities, well adapted for market products; for an eminent English cultivator, T. Rivers, of Sawbridgeworth, who has had abundant experience in their cultivation, had last summer a plantation of no less than 1500 trees of the Louise Bonne de Jersey alone, for supplying the London market, and intended the past autumn, to increase the number to 3000.

All pears, it is well known, do not succeed equally well when treated in this way. A large portion of the varieties appear to be but little changed in size and quality; but a few are vastly improved, and on the the other hand some do not succeed at all, when grafted or budded directly upon the quince. Experiments are much needed; and with the hope of encouraging their increase, a few results, with some of the most celebrated varieties, are given.

The *Duchesse d' Angoulême* has long been known to be incomparably improved on quince, and its culture at present is hardly attempted by good cultivators on the pear. *Beurré Diel* is much higher flavored; Rivers says "this pear seldom ripens well on the pear stock; on the quince the fruit are larger, more handsome, of perfect flavor, and they invariably ripen well." He also states the following fact relative to the *Beurré d' Aremberg*:—"Of this, I ate my best specimens about the middle of last April; they were vinous, juicy and delicious, from plants on the quince. Specimens from plants on the pear stock, kept only till the end of February." It has also been found in this country to succeed finely on the quince. Of the *Glout Morceau* his report is highly favorable:—"Grows freely on the pear stock and blooms freely; but seldom bears any clear fruit; they are generally full of spots, and often do not ripen at all kindly. On the quince stock it bears clear handsome fruit, which invariably ripen, and are very highly flavored." M. P. Wilder, of Boston, says, "Few varieties succeed so well on the quince as the Glout Morceau; a tree of which, in my own ground, *annually produces a barrel of large, perfect fruit*. In growth, it is more luxuriant on the quince." Manning says of the *Easter Beurré*, "it bears abundant crops, grafted either on the pear or quince;" but Rivers asserts that "on the pear stock [in open ground] it is a most crab-like pear, bearing but very seldom and never ripening; on the quince it bears well, is of high flavor and always ripens in April and May; it is, however, inclined to be gritty at the core, the only pear I have found to be so on quince stock." This unfavorable report of the Easter Beurré, when on pear roots, we fear will be found to apply to a considerable extent in most localities here. It is on this account that M. P. Wilder excludes it from his list of the "five best winter pears" in the Horticulturist; although he remarks it succeeds better on the quince. A writer in the Prairie Farmer states, however, that he has found trees of this variety usually liable to be broken off by wind at the juncture of the quince and pear. Of the *Wilkinson*, Manning remarks, "If grafted on the quince, it is smaller, more prolific, higher flavored, and a brighter red cheek, than if grafted on the pear stock." A remarkable change for the better was found by T. Rivers to take place in the *Fortunes*, which was "a perfect crab" from trees on the pear stock, but very melting and juicy, and a good pear on the quince. The *Jargonelle* and *Passe Colmar* were both found by this distinguished cultivator, to be greatly improved in quality. No variety however, appears to be more *at home* on the quince than the *Louise Bonne of Jersey*, whether in this country or in England. "This," says Rivers, "of all the pears I know, is most benefitted by working on the quince. My specimen tree, on a pear stock, now twelve years old, has scarcely borne a dozen good clear fruit, and some standards of nearly twenty years growth canker at the tips of their shoots, and their fruit is, in most seasons, spotted and misshapen. On the quince how different! I have trees from three to five years old; full of fruit, and these have hitherto every season been large, remarkably high colored, beautiful, and of the highest flavor." Cheever Newhall, of Dorchester, Mass. states, that while the *White Doyenné* succeeds well at that place on quince, it is worthless on pear stock; the *Madeleine* is fine on its own roots, but cracks, and is astringent and worthless on the quince. The *Golden Beurré of Bilboa*, according to J. M. Ives, of Salem, succeeds well on a quince stock, growing "large and beautiful."

Besides these varieties already named on the authority of T. Rivers, as being improved on the quince, he gives the names of the following in his article on this subject in the *Gardener's Chronicle*, from which the preceding remarks have been quoted:—

Beurre d' Amalis,
" Ananas,
" de Capiaumont,
Bonchretien, Williams',
Chaumontelle,
Citron des Carmes,
Colmar,
Colmar d'Aremberg,
Comte de Lamy,
Crassane,
Doyenne Gris,
" White,
Duchesse d'Orleans,
Forelle, or Trout Pear,
Franc Real, Summer,
Gratioli of Jersey,
King Edwards'.

In the same article, the following are given as not succeeding well on the quince; unless double worked, which is done by budding or grafting some freely growing variety on the quince, and then re-grafting the "refractory sort" into the pear-shoot thus obtained.

Bergamot, Autumn,
" Gansel's,
Beurre Bosc,
" Ranz,
Broom Park,
Brougham,
Crassane, Althorp,
" Winter,
Dunmore,
Hacon's Incomparable,
Inconnue, Van Mons, 175.
Jean de Witte,
Marie Louise,
Monarch. Knights',
Nelis, Winter,
Ne plus Meuris,
Saint Marc,
Seckel,
Suffolk Thorn,
Thompson's,
Urbaniste.

The object of this double working is to enable all these varieties to partake of the improvement wrought in their quality by working on quince.

There are a few varieties, in which, we perceive "doctors disagree," probably from a difference in climate and other influences, and which would seem to indicate that a successful trial on quince in one country or region, may not certainly prove its fitness for another. For instance,—the Citron des Carmes (or Madeleine) is named in the first list, as among pears improved on the quince, although Cheever Newhall of Mass. found it "astringent and worthless" when so treated.—Again,—Williams' Bonchretien (or Bartlett) is named in the same favorable list; but in Manning's Fruit Book, (p. 43,) this variety is cited as an example of pears which do not thrive well directly upon the quince. On the other hand the Winter Nelis is placed in the second or unfavorable list; M. P. Wilder however, remarks that its growth is stronger on the quince to which it seems well adapted. The Beurré Bosc is widely known to be of difficult growth on the quince; Rivers says it is "exceedingly refractory,"—and that he doubts its success when double-worked. J. M. Ives of Salem, states, however, in the *Horticulturist*, that he has grown this pear *directly* on quince for many years, and that it grows luxuriantly, but bears poorly; but that when double-worked it does admirably.

It is hardly necessary in this article, to remark that the common quince is of too slow growth for pear stocks; the variety known as the Portugal Quince, or some other equally vigorous, being necessary.

To insure safety from the *borer*, S. G. Perkins had his quince-rooted pears examined regularly twice a year, once early in summer, and once at mid-autumn; his gardener going over six or seven hundred trees in a day—a comparatively light task.

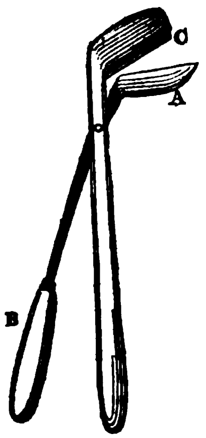
Grafting.

Since root-grafting has been so generally adopted for the propagation of the apple, a saving of valuable time is effected by performing the work within doors during the latter part of winter. It is hardly necessary here to repeat the directions so often given for this operation, yet a few hints may be of use to some. After many years trial, we are satisfied that the application of small wax plasters, closely bound, is far more certainly followed by success, than their omission, or the mere use of tow ligatures. In some seasons, the difference may not be strikingly apparent; but in others, the losses from the neglect of the wax, will more than triple those with its use. Whip grafting, with tongues, being usually adopted, the tongues should be of sufficient size and thickness to interlock with firmness, requiring considerable force to separate them. Hence large roots, and thrifty, well ripened scions, are indispensable. From repeated observation, it also appears, that grafted roots succeed decidedly better in soils with a considerable portion of clay, or in strong loams, than in lighter soils, and especially those of a gravelly nature. Where portions of the root six inches long, or nearly the whole root of a single tree are used, the growth is better or more certain than when cut into smaller parts. In packing them away in boxes, after having been grafted, wet saw-dust will be found most convenient, being much lighter and more portable than sand, and quite equal in other respects.

Grafting the *cherry* can hardly be done too early. The writer has never succeeded better, (losing scarcely a graft in a hundred,) than when the work has been done while the snow yet remained on the ground, using a furnace or chafing dish to soften the wax. It is important also that the plum be grafted before the swelling of the buds.

In all kinds of grafting, it is very essential that the freshly cut faces of the graft and stock be brought into as close and perfect contact as possible, that the sap and juices may uninterruptedly pass from one to the other. Hence a sharp knife, to make a smooth, clear face on each, becomes indispensable. In cleft-grafting, however, (a mode which has some advantages over all others,) as it has been usually performed, the *rough, split surface* of the stock comes in contact with the graft, and the union is imperfect. We notice in the last number of the Horticulturist, a description of a newly invented implement, called the *Stock-Splitter*, to obviate this difficulty. It makes a smooth, clear cut, through the bark and wood together, without splitting the surface, and besides being more expeditious, forms a more perfect fit between the two united parts. This implement is highly commended by the editor of the

Horticulturist; and the writer can also add his testimony in its favor, having for many years used one of precisely similar operation, but of much simpler construction, and which was figured and described in the Fruit Culturist. As it appears never to have been much used, we append a figure and description for the benefit of our readers. The thin cutting blade A, is about two and a half inches long, set back at an angle of a hundred and twenty degrees with the shaft and handle B, which moves it as a lever, in cutting; and when shut, reaches the concave bed or groove, sheathed with leather, in the wooden piece, C. These two pieces, with the connecting pivot, constitute the whole implement. The angle which the blade forms with the handles, causes an oblique or *sawing* motion to the edge of the blade, which renders it far more effective in cutting, than the one described in the Horticulturist, where the blade acts directly, not obliquely, by means of a lever and wheel. This tool is used in cutting off the heads of the stocks, preparatory to grafting, as well as in forming the slit of the graft; and the quickness and ease with which a tree an inch or more in diameter is severed at one stroke at right angles, is astonishing to one who first tries it—a slight pressure with the left hand against the top of the tree being given at the same time. A blacksmith will make the blade in half an hour, and another hour's work will complete the implement. The writer has used one extensively for a dozen years, and it will apparently last as much longer, without any repair.



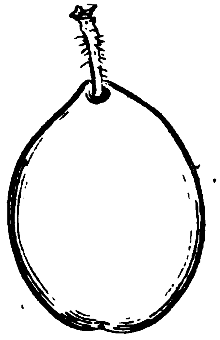
Stock-Splitter—Fig. 17.

Early Fruits.

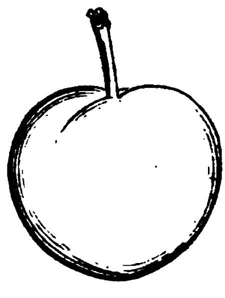
THE PRIMORDIAN AND CHERRY PLUMS.—The value of very early fruit is indicated by the eagerness with which the first ripening specimens are plucked from the early trees, or the high prices which such fruit always commands in market. A variety, even if second or third-rate in quality, becomes desirable, if but a few days in advance of all other sorts. There are, we believe, no plums which nearly approach in early maturity the two we have here figured.

THE WHITE PRIMORDIAN, *Jaune Hative, or Early Yellow*, appears to have been much underrated, or at any rate, its merits entitle it to a far more extensive cultivation. It appears to be the earliest known variety; its quality is good, certainly equal to some later ones, whose large size and showy appearance have given them a high reputation; and it is a most abundant bearer. The tree is of slender and slow growth, and of rather difficult propagation, which is perhaps one reason it is rarely to be found in nurseries.* With this exception, it appears to be quite superior to the Cherry plum—it greatly excels it in productiveness. Fully grown trees are usually loaded with as heavy a crop as the branches can bear.

The fruit is small, the figure indicating the size of an average specimen, somewhat obovate, slightly marked, surface smooth, greenish yellow at first, becoming a fine clear yellow when fully ripe; stalk half an inch long, slender, downy, in a very narrow rather deep cavity; flesh yellow, moderately juicy, delicate in texture, of a very pleasant sweet (no acidity) but not high flavor; stone small, parting freely from the flesh. Branches slender, quite downy. It ripens at or a little before the usual time of wheat harvest, or in the early part of 7 mo. (July.)



Primordian.



Cherry Plum.

THE CHERRY PLUM, *Early Scarlet, or Myrobolan*, is rather smaller than the Primordian, and just perceptibly later; the tree is a freer grower, and the fruit more showy, but in all other particulars it is inferior. It is nearly round, color bright red, flesh greenish yellow, very juicy, rather coarser in texture than the Primordian, subacid, pleasant flavor, but not rich. It ripens during the latter part of wheat harvesting. Under ordinary management, it is so poor a bearer as to be scarcely worth cultivating, even by the amateur; but we are informed in the Horticulturist, that Samuel Reeve, of New-Jersey, raises abundant crops every year, by retarding the luxuriant growth of the tree by transplanting them every five or six years; and hence root-pruning is recommended for the same purpose. There are some doubts, however, whether over-luxuriance is always the cause of its sterility, as old trees, growing in western New-York, as they advanced in age and decreased in thrifty growth, still remained nearly barren.

Profits of Orchards.

The past season has been remarkable for the inequality of the apple crop; for while in some parts of the country it has been a total failure, in others, orchards have been uncommonly productive. Perhaps no where have they yielded more abundantly than in the western part of Wayne County, New-York, and the adjacent region. The following are not extraordinary examples, and all occurring within about one mile of the residence of the writer. On one farm, one acre of ground is occupied chiefly with large trees of the Rhode Island Greening. The product was two hundred barrels, after reserving a sufficient quantity for domestic use. The price was sixty-two and a-half cents per barrel, and the aggregate amount one hundred and twenty-five dollars. Deducting twenty-five dollars for picking and carting to market on the Erie canal, which is more than the actual cost, we have one hundred dollars the nett proceeds of a single acre. It would require but a small farm, at this rate, to yield a greater revenue, than the salary of the Governor of the State.

On another farm, half a mile distant, there are four and a-half acres of orchard, with vacancies nearly equal to one acre. The proprietor sold six hundred and fifty barrels, for four hundred and six dollars, besides reserving a supply for his own use; which is very near the amount per acre in the former instance. In this orchard, one tree of the Rhode Island Greening, bore forty bushels; and two neighbors had each a tree of the same variety, the crop from each exceeding forty bushels, or ten dollars per tree.

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* It may be possible that this plum does not succeed so well in other places as in Western New-York, to which these remarks apply.

Such profitable returns have caused a great variety of new orchards to be set out, in addition to many within a year or two past. But the market will not be soon glutted; for while a few only keep their newly planted orchards well manured, cultivated, the soil mellow, and the earth round the trees entirely free from grass, weeds, or any sown crop; the great majority plant out their trees in meadows, pastures or grain fields, to be overrun with grass and weeds. A hill of corn thus treated would produce nothing; and the young trees, (which require as good treatment as corn,) make but little growth, if indeed they happen to live through the treatment they receive. Thus, instead of yielding a profitable return, as they might do in five years, they are not likely to bear much in less than fifteen or twenty. It is true that many who pursue this course, are not aware of the disadvantages under which they are working; although they expend twenty-five or thirty dollars for trees, they "can't any how afford" to take an agricultural or horticultural paper, which would show them a better way. This is, emphatically, wasting at the bung, in order to save at the tap.

White-wash on Fruit Trees.

A. J. DOWNING and others, have given it as their opinion, that an injurious effect is produced on fruit trees by the sun's rays, when they strike the body and limbs with direct force, while the sap is frozen, or when there are sudden changes from cloud to sunshine. The writer has not had sufficient opportunity for comparison to form a positive opinion in the case; but as it has been suggested that the application of white-wash to trees, would have the effect to refract the rays of the sun, and thus prevent the heat being communicated to the trunk and branches, it is proper to notice any experiments which have a bearing on the subject.

In the January number of the *Horticulturist*, the editor states that he took two thermometers, which agreed perfectly; and to the bulb of one of them he applied a thick coating of white-wash and allowed it to become dry; the other was left as usual. The result is given as follows:

"After being exposed for an hour to the full sunshine, the naked thermometer indicated 97°—the thermometer with the white-washed bulb only 79°—being a difference of 18°."

The Columbia Pear.

Will you or some of your readers give through the *Cultivator*, the history of the Columbia or Columbian Virgalieu pear?—its history, good qualities, size and time of ripening. Also why it is, that when we have such pears as the Dix, Marie Louise, Dunmore, &c. we so rarely see their names in the list of the *best*. I am well aware that the largest is not always the best, but I should think they ought to take the preference when they are equal in flavor and productiveness.

THOS. R. PECK.

West Bloomfield, Ontario Co., N. Y.

A. J. DOWNING, in his *Fruits and Fruit Trees*, says of the Columbia—"This splendid American pear is one of the most excellent qualities, and will we think, become more generally popular than any other early winter fruit. It is large, handsome, very productive, and has a rich, sugary flavor, resembling, but often surpassing, that of the Beurrè Diel. The original tree grows on the farm of Mr. CASSER, in Westchester county, 13 miles from New-York." It is spoken of as very productive. It is described in the work above referred to as follows:

"Fruit large, regularly formed, obovate, usually a little oblong, and always broadest in the middle. Skin smooth and fair, pale green in the autumn, but when ripe, of a fine golden yellow, with occasionally a soft orange tinge on its cheek, and dotted with small gray dots. Stalk more than an inch long, slender, slightly curved, placed towards one side of the narrow depression. Calyx of medium size, partially open, set in a very shallow basin. Flesh white, not very fine grained, but melting, juicy, with a sweet, rich and excellent, aromatic flavor. November to January."

Select Varieties of Fruit.

In the November number of the Horticulturist, the editor gives the following lists of fruits, "unimpeachably good in all soils"—"which have won a *large vote* by their uniformity of character:"

Apples—9 *varieties.*

Early Harvest,
Early Strawberry,
Williams' Favorite,
Gravenstein,
Porter,
Baldwin,
Ladies' Sweeting,
Rhode Island Greening,
Roxbury Russet.

Pears—9 *varieties.*

Bartlett,
Beurre Bosc,
Dix,
Fondante d'Automne,
Gray Doyenne,
Louise Bonne de Jersey,
Seckel,
Beurre d'Aremberg,
Winter Nelis.

Plums—8 *varieties.*

Bleecker's Gage,
Coe's Golden Drop,
Diapree Rouge,
Green Gage,
Jefferson,
Lawrence's Favorite,
Smith's Orleans,
Purple Favorite.

Cherries—8 *varieties.*

Bauman's May,
Black Tartarian,
Black Eagle,
Downer's Late,
Downton,
Bigarreau,
Elton,
Mayduke.

Peaches—8 *varieties.*

Early York,
George IV,
Grosse Mignonne,
Coolidge's Favorite.
Bergen's Yellow,
Royal George,
Oldmixon Freestone,
Large White Cling.

Apricots—Moorpark, Breda.
Nectarines—Elruge, Early Violet.

We believe the preceding list to be nearly as perfect as can be furnished with the present amount of experience in this country. Such fine varieties as the Newtown pippin, Fall pippin, and the White Doyenné pear, are rejected because they do not succeed *universally*. Perhaps further trial will compel the rejection on the same grounds of one or two others; the Gray Doyenné, for instance, although succeeding well in the Eastern States and England, cracks badly at Cleaveland in Ohio, according to Dr. Kirtland and F. R. Elliott; and the Baldwin apple grown at Cleaveland, we are also informed is affected with bitter rot. A more extensive trial of the Jefferson plum throughout this country, would more perfectly settle its claim to uniform excellence. This select list, however, is unquestionably the best which has yet appeared.

White Black-berry.

J. H. YOUNG, of Brunswick, Pa., sends the following account of a white black-berry he has found. We have heard of a similar fruit in several localities, one of which is Stephentown, Rensselaer Co., N. Y.

"If I am not mistaken, I have discovered a *new berry*. I have inquired and searched extensively, and have found nothing like it. It is a *white black-berry!* I propose to name it the *white-berry*. The bush resembles the common black-berry, *Rubus villosus*; but the berry is larger and sweeter, and when fully ripe has the color of the white rasp-berry. It *tastes* like the black-berry, only "*much more so*,"—as the man said of the cauliflower, when comparing it with cabbage. If this species of berry has been described by naturalists, please inform your readers accordingly. I forbear a more particular description until I shall have ascertained that fact. It may turn out at last to be well known in some other localities, and to have been noticed by botanists under a name not familiar to me."

NEW-YORK STATE AGRICULTURAL SOCIETY.

The annual meeting of this Society was held in this city on the 19th and 20th of last month. The session was commenced at the Assembly Chamber at 12 o'clock on the 19th—the President of the Society, Geo. Vail, Esq. in the Chair, and Benj. P. Johnson, Esq. Secretary.

After the meeting was organized, and an opportunity offered to all who desired, to become members of the Society, Mr. Johnson read the annual report of the Executive Committee, detailing their labors for the past year, which was accepted, and approved.

Mr. J. M'D. M'Intyre, the treasurer, then read his annual report. The following balance sheet shows the condition of the financial affairs of the society:—

Balance from last report and receipts from various sources during the year,		$6,457 19
Disbursements during the year :—		
Premiums paid,	$2,266 73	
Incidental expenses,	514 78	
Library,	61 22	
Salaries,	947 27	
Expenses, 1846,	312 88	
Other expenses,	547 75	
Invested 1st Oct. last,	1,000 00	
		5,650 63
Balance on hand,		806 56
		$6,457 19

The President stated that the permanent fund of the society now amounted to $8,000.

Mr. L. F. Allen, of Black Rock, said, it would be recollected that at the last annual meeting, he had submitted an amendment to the constitution of the society, rendered necessary by the change in the constitution of the State. He moved to substitute *judicial* districts instead of *Senate* districts, as it now read.—It was a mere matter of form. The amendment was agreed to.

Mr. T. Smith, of Schoharie, offered a resolution providing that a committee of three from each judicial district, be selected by the members from each district, to report the names of officers for the ensuing year, and to recommend the place of holding the next fair.

Mr. Geddes, of Onondaga, gave notice that at the next annual meeting of the society, he would move an amendment to the constitution, so as to exclude the ex-presidents of the society from the executive committee, they having been added to the board by an amendment adopted last year.

Mr. G. W. Clinton, of Buffalo, said that he was instructed to present a resolution of the Common Council of that city, asking that the next annual Fair should be held at Buffalo. That city had waited patiently and properly, until every other section of the state had been visited—until they now supposed that their turn had come. The people of Buffalo were now strenuous and hearty in this matter, and full provision had been made by the citizens and the common council for the reception of the society, and the accommodation of the Fair; should it visit that place, and the Fair be held there, he would promise for them at least a good western welcome.

Mr. Viele, of Troy, moved the reference of the matter to the committee to be raised under Mr. T. Smith's resolution. Agreed to.

Mr. T. Smith, of Schoharie, presented a communication from citizens of Geneva, asking that the next Fair might be held at that place. It had the same reference as the other.

The following gentlemen were then announced as the committee of three from each judicial district:—

1. George E. Sickles, Robert G. Campbell, Ambrose Stevens, New-York.
2. Geo. B. Butler, Westchester; John E. Jones, Kings; Wessel S. Smith, Queens
3. E. P. Prentice, Albany; J. P. Beekman, Columbia; Amos Briggs, Rensselaer.
4. S. Cheever, Saratoga; W. H. Butrick, Essex; J. T. Blanchard, Saratoga.
5. A. Z McCarthy, Oswego; George Geddes, Onondaga; B. M. Huntington, Oneida.
6. B. Enos, Madison; J. Bennett, Otsego; Geo. W. Buck, Chemung.
7. B. F. Angel, Livingston; T. D. Burrill, Ontario; J. M. Sherwood, Cayuga.
8. A. T. Upham, T. Cary, J. T. Bush.

Mr. T. Smith laid on the table a resolution declaring that the interests of the society would be promoted by fixing a permanent location for future State Fairs after the next one.

Mr. L. F. Allen wished to make a report in part from the committee on fruits. This was acknowledged to be an important subject, and in addition to those reported last winter, he would recommend the following fruits as worthy of cultivation by the people:

Pears—*Summer*—Bloodgood, Madeleine, Dearborn's Seedling *Autumn*—Fondante d'Automne, Bartlett, Seckel, White Doyenne. Swan's Orange, Steven's Genesee, Louise Bonne d'Jersey, Beurre Bosc, Grey Doyenne, Washington. *Winter*—Beurre d'Aremberg, Glout Moreeau, Winter Nelis, Vicar of Winkfield.

Plums—Jefferson, Schenectady Catherine, Reine Claude, Columbia, Huling's Superb, Bleecker's Gage, Albany Beauty, Washington Bolmar, Prince's Imperial Gage, Coe's Golden Drop, Denniston's Red, Peach, Lawrence's Favorite, and Prune d'Agen, for prunes.

Cherries—Mayduke, Florence, Black Tartarian, Yellow Spanish, Holland Bigarreau, Elton, Downer's Late.

Peaches—Early Tillotson, George IV. Grosse Mignonne, Morris White, Royal George, Yellow Rareripe, Crawford's Early, Red Rareripe, Red Cheek Melocoton, Cooledge's Favorite, Malta, Brevort's Morris.

Strawberries—Early Scarlet, Hovey's Seedling, Swainstone's Seedling.

Mr. L. F. Allen laid on the table resolutions which he wished to have considered, after the address in the evening—proposing that the Smithsonian Institution at Washington should include agriculture among its objects—and also that Mt. Vernon should be purchased for an Agricultural Educational Institution.

Adjourned to 4 o'clock, P. M.

Four o'clock, P. M.

Mr. Angel, from the committee appointed for the purpose, reported the following list of officers for the ensuing year:—

For President—LEWIS F. ALLEN of Erie.

Vice Presidents—1st district, Ambrose Stevens; 2d, John A. King of Queens; 3d, E. P. Prentice of Albany; 4th, Samuel Cheever of Saratoga; 5th, George Geddes of Onondaga; 6th, George W. Buck of Chemung; 7th, Allen Ayrault of Livingston; 8th, James C. Ferris of Wyoming.

Rec. Secretary—Benj. P. Johnson of Albany

Cor. Secretary—Ebenezer Emmons of Albany.

Treasurer—John McD McIntyre of Albany.

Executive Committee—Luther Tucker of Albany, John J. Viele of Rensselaer. Joel Rathbone of Albany, John T. Bush of Erie, Theodore C. Peters of Genesee.

The committee also recommended unanimously, that Buffalo be the place for holding the next annual Fair.

The report was accepted, and the persons named elected.

Adjourned to 7 o'clock, P. M.

At 7 o'clock, P. M., the society convened at the Assembly chamber to hear an address by Prof. J. P. Norton of Yale College. Mr. N. gave an admirable exposition of the connexion of science with practical agriculture. His illustrations were numerous and of so plain and simple a character as to be at once understood. He was listened to for upwards of an hour by a very large audience, whose satisfaction was evinced by the most profound attention. The address will probably be published.

On motion of Mr. J. A. King it was resolved, That the thanks of this Society be presented to Prof. Norton for his able and scientific Address, and that he be requested to furnish a copy of it for publication.

January 20, 1848.

The Society convened at its rooms in the old State Hall, at 10 o'clock, A. M., when the reports of the Committees on Premiums were read.

At 7 o'clock, P. M., the Society again convened at the Assembly Chamber, when Mr. Johnson, the Secretary, read the following abstract of the reports of the committees to award Premiums, as follows:

PREMIUMS.

On Farms.—1. John Delafield, Oakland, Seneca Co.,—$50. 2. Peter Crispel, jr., Hurley, Ulster Co.—$30. 3. James Pendil, Batavia, Genesee Co.—$20. 4. Lucas V. V. Schuyler, Watervliet—set Transactions.

Draining.—H. D. Spoor, Troy—$10. E. J. Woolsey, Long Island—Set Trans. E. C. Bliss, Westfield, Chautauque—Trans 1846.

Farm Buildings—*Dwelling.*—Mrs. Sanford Howard, Albany—$20. *Piggery*—S. W. Jewett, Weybridge, Vt.—$10.

Cheese Dairies.—Alonzo L. Fish, Cedarville, Herkimer Co., statement of experiments, &c.—$50. Newberry Bronson, Warsaw, Wyoming Co.—$20.

Butter Dairies.—B. A. Hall, New Lebanon, Columbia—$50.

Field Crops—*Spring Wheat.*—2. Robert Eells, Westmoreland, Oneida Co., 20½ bush. per acre—$8.

Indian Corn.—George Vail, Troy, 67 bush. per acre—$20.

Barley.—Benj. Enos, De Ruyter, Madison Co., 39 bush. per acre—$10.

Oats.—1. Charles W. Eells, Kirkland, Oneida Co., 86 bush. per acre—$10. 2. Benj. Enos, De Ruyter, 71 bush. per acre—$8.

Beans.—E. C. Bliss. Westfield, 31½ bush. per acre—$8.

Flax.—Wm. Newcomb, Pittstown, Rensselaer Co.—$5. E. C. Bliss, Westfield—Trans.

Root Crops—*Potatoes*—1. Daniel Newcomb, Pittstown, Rensselaer Co., 405 bush. per acre—$10. 2. Martin Springer, Brunswick, Rens. Co., 369 bush. per acre—$8.

Ruta Bagas.—1. Joseph Hastings, Brunswick, Rens. Co., 1,317 bush. per acre—$10.

Carrots.—1. Wm. Risley, Fredonia, Chautauque Co., 557 bush. on half an acre—$8.

Experiments.—W. D. Osborn, Port Byron, Cayuga Co., on 3 acres planted with corn, 1846—$20. 1st acre, manured with 10 cords barnyard manure before corn—no manure on any part this year—Oats, 1847, 90¾ bush per acre 2d acre, 1846, Corn, without manure—Oats, 1847, 88½ bush. per acre. 3d acre, manured with 8 cords of manure and 4 loads of muck, 1846—Oats, 1847, 112 bush. per acre.

Fruits.—Charles Lee, Penn Yan, Yates Co., 2d premium for a Seedling winter apple, "Wagener Apple"—$5, and Downing's common edition of "Fruits and Fruit Trees."

The Committee also remark, that two Seedling winter apples were presented to the Committee—one called the "Middle Apple," from Herkimer, Herkimer County, and the other produced from the seed of the Newtown Pippin, in Albany County, without a name; but as no description of the growth and habits of the trees, according to the regulations of the Society, were produced, they postponed the further consideration of those fruits until the next annual meeting, and request the producers of these fruits to transmit to the Committee the natural history and character of the trees producing said fruits.

After the reading of the above, the President of the Society, Mr. Vail, delivered his valedictory address, which presented a flattering and encouraging view of the progress of the Society during past years, and of its prospects for the future. A unanimous vote of thanks was presented to Mr. Vail, and a copy of the address solicited for the use of the Society.

On concluding his remarks, Mr. Vail introduced the President elect, Mr. Allen, who in a brief an appropriate speech, returned thanks to the Society, and signified his acceptance of the office.

Mr. Burchard offered some resolutions in relation to the importance of education to the farmer, and expressive of the advantage which would result by the establishment of Agricultural Schools in connexion with Experimental Farms, which were unanimously adopted. The Society then adjourned.

January 21, 1848.

The Executive Committee met at the rooms of the Society at 10 o'clock—the President L. F. Allen, Esq., in the chair. Present: Messrs. Sherwood, Vail, Prentice, Johnson, Viele, Tucker, Stevens, Ayrault, King, McIntyre, Emmons, Rathbone, and several gentlemen from different parts of the State.

A committee of gentlemen from Buffalo, having given the usual guarantee that the expenses attendant on holding the next Annual Exhibition should be paid by the citizens of Buffalo, it was, on motion of Mr. Sherwood,

Resolved, That the next Fair and Cattle Show of the New-York State Ag. Society, be held at the city of Buffalo, on the 12th, 13th and 14th days of September next.

The Executive Committee were occupied during the day, in the preparation of the Prize List, which we hope to be able to present, complete, to our readers next month.

County Agricultural Societies.

Queens Co. Agricultural Society.—The annual meeting of this society was held on the 24th Dec.

The first premium for corn was awarded to Timothy Nostrand, Jamaica, for 112 busheles shelled corn per acre, raised at a cost of $13.25.

The first premium for turneps to Wm. Ketcham, Jericho, for 628 bushels, at a cost of $33.96, leaving a profit after deducting charges, including cost of taking to market, $173.70 per acre.

Resolutions in favor of Legislative aid being continued, were unanimously adopted.

John A. King was elected president, and Albert G. Carll, secretary. Communications intended for the society, should be addressed to the secretary at Jericho.

Jefferson County Ag. Society.—This enterprising society has, we learn, elected for its officers the present year, the following gentlemen:—Willard Ives, Watertown, President; E. S. Massey, Secretary; John C. Sterling, Corresponding Secretary; C. V. Brainerd, Treasurer.

Cortdand Co. Ag. Society.—The following gentlemen were appointed officers of the above named Society for the ensuing year, at its late annual meeting: James S. Leach, President; Harvy Woolston, Morris Miller, Peter Walrod, Martin Sanders, Vice Presidents; Noah Hitchcock, jr., Treasurer; Henry S. Randall, Rec. Secretary; Amos Herbert, Cor. Secretary; O. M. Shedd, A. L. Chamberlain, Manly Hobert, Hiram Hopkins, James A. Rogers, S. D. Freer, Moses Kinney, Daniel Rowley, Ira Bowen, Selden D. Munger, Executive Committee; F. H. Hibbard, Marshal. The next fair will be held in Cortland Village.

Saint John Agricultural and Horticultural Society.—We have received a copy of the Annual Report of the Directors of the Saint John (New Brunswick) Ag. Society. It does not appear, from the report, that agriculture is in a very flourishing condition in the Province; but from the active measures which the Society is taking, we are led to expect a turn in favor of its improvement at no distant day. The Directors show, plainly, that farming may be made a profitable business in that section.

Good Farming in Virginia.—Retired public men sometimes succeed quite as well at farming as they do in managing public affairs. A writer in the *National Standard* says that John Tyler had 200 acres of wheat the past season, on a field which three years ago when he moved on, would not produce more than the seed. This year it had twenty bushels per acre. Marl and manure caused the difference.

THE FARMER'S NOTE BOOK.

Unenclosed Lands.

MESSRS. EDITORS—In the December number of the Cultivator, you allude to the fact that along the valley of the Connecticut, in Massachusetts, "there are large portions of territory unenclosed, yet there are thousands of acres under cultivation," &c.

Now we are proud to have such a paragraph as the one above cited and those that follow it, written of Massachusettss; for it is to the honor of any State to have such things said of them, and most certainly very much to the comfort of the population to have them exist; for within the last week an intelligent man has remarked, that it was "worth ten dollars a year to any farmer to have the streets keep clear of animals." Another, who has been proprietor of a small farm since 1842, says that this public guardianship has been worth more than $100 to him in the six intervening seasons.

But let us look at the contrast which a few years have effected in this matter in our ancient, and in some things we hope wise, Commonwealth. Previous to the revision of the statutes of 1836, by the law it was left discretionary with towns to say at their annual meeting, whether "swine and neat cattle should be permitted to run at large under certain restrictions." Very naturally, every town adopted the course which their supposed interest and inclination prompted. In many places, especially in the western part of the state, the usual course was to let them ramble at discretion.

The consequences were, that our streets were so commonly plowed by the long-nosed swine of those days, once at least in a season, that large crops of various unsightly weeds sprung up along the wayside to illustrate the beauty of the thorns and thistles overgrowing the vineyard of the man void of understanding. Large herds of cattle were seen rambling in every direction. These, one might suppose from their general movements, were acting in the capacity of *fence viewers*, for unless barriers were erected between the highway and the adjoining crops, almost high enough for the walls of a fortified city, they were sure to find the discrepancy, which they took for an invitation to "walk in," and partake, in such quantities as their voracious appetites demanded, of the good man's labor. Oh! what vexations arose when these pilferers, licensed by owners who had forgotten the law of love for their neighbors, and the law of right in their dealings with their fellow men, had broken into the meadows, and were perhaps trampling down the cornfield whose luxuriant growth had promised a bountiful harvest, or, perhaps, wading through wheat ready for the sickle, and which, but for lowering skies, might then have been in the reaper's hands, instead of being garnered into the capacious stomachs of the wandering, starved, sacrilegious herd of trespassers, sent out to the daily task of highway robbery. Then, what care was necessary, that every gate and bar should be kept shut, for as sure as they were left for a moment unsecure, a host of quadruped Philistines were ready to enter in and spoil the land. It was not strange in such a state of things, with every temptation before them, that could be offered to educate them in wrong, driven by starving necessity one day, and invited by sumptuous prospects another, that cattle became unruly in their propensities, and ungoverned in their habits, or that they were induced to wander off, frequently to the annoyance of their owners, and sometimes as if to give a lesson of instruction, a total loss to them. But there were further evils, which are not wholly unimportant, attending this loose and illiberal state of things. If any one was so fortunate as to have a watering place by the wayside, near his residence, he was sure to receive a double portion of the visits of congregated groups of thirsty animals on a warm summer's day; and then wo to his crops, however lofty the barriers that separated them from the "long pasture," herded by a whole community. Perhaps a shade tree threw its spreading arms from his premises (it may be from his door yard, and around his front gate) over the highway. Under a cluster of such trees we found they were sure to make their nooning, and the appearance of the soft sward, and the effluvia round about, we leave others to imagine rather than describe.

The convention that revised our statutes in 1836, saw these evils, and perfected a plan for their remedy; and we have no doubt that the benefits of the single enactment relative to prohibiting animals from running at large in the highways and on unenclosed lands, have already been sufficient to defray the expenses of their whole session, and yet the first fruits of their labor are hardly beginning to be enjoyed. They gave us a statute expressly in this matter, and which cannot be mistaken in its import. In its first application it runs thus:—"The field drivers *shall* take up at any time, all sheep, hogs, horses, or neat cattle found going at large and without a keeper, in the highways or on unimproved lands;" and the field driver is sworn like other officers to the faithful discharge of his duty. So it will be seen there is no ground to parley in the matter, no discretionary power. If a field driver does not construe the law in its plain and simple meaning, it implies at once that he is blinded by prejudice, or led astray by mistaken motives.

After the liberal construction and discretionary power given by the former law, it was in no way strange that one so stringent in its application as the present, should find opposition in every community. This was truly the case we believe, more or less, in every section of the Commonwealth. In some places severe threats were given, in case men did their duty, when they had solemnly sworn to do it. In some, it may be, summary acts were committed on the property of such individuals who dared to do as the law of the land said they must do or perjure themselves before high heaven, and become guilty and untrustworthy in the sight of their fellow men.

But the progress of the matter has been onward, and as you have lately had an opportunity to witness, its triumphs in some places have been complete. In others it is approaching that desirable position, and in all, even our most "secluded nooks and corners," it augurs well of its triumph. "Public opinion," that tribunal which will scarcely allow an appeal from its decisions, is growing stronger and stronger in its approval of the letter of the law, and individual prejudice, which is so prone to take root in the unbroken ground of self-interest, is yielding in its favor as a means of accomplishing its own ends. As you truly related, the state of things in our Commonwealth is essentially improved by the existence of this law. The farmer can now retire at night with the reflection that his crops are safe from highway depredators of all classes, except lawless bipeds, which no fences can stop, and law seldom restrain. He can plant trees along the wayside, and sit quietly and comfortably under the shadows of them—if convenience require, he

can have half a dozen gates or bars open through the day, in the business of the farm, and no annoyance near—he can *drive* his own animals without inconvenience from those who have no driver—woman and little children can walk the streets quietly and safely without danger from wild, disorderly animals—the waysides, unless used for plowed crops, exhibit a gay, vernal appearance, and when newly mowed present a lovely sight. In fact *countless* benefits attend this improved state of things, and not a solitary wrong thing in the whole matter. Wise are the legislators who enact such good and wholesome laws for the preservation of our rights and safety. Public benefactors are the men who come boldly out and sustain them in their early adoption; and "happy are the people" who live under their salutary influence. May a similar condition to that which Massachusetts is now approaching, and which she is ultimately to attain through all her borders in these matters, be speedily realized all over the nation, and through the world. WILLIAM BACON.
Richmond, Jan., 1848.

Farmer's Clubs.

We are pleased to learn that a Farmer's Club has been formed in Clinton, Oneida county, N. Y. We have received a communication from a correspondent in reference to this association from which we give the following. We would refer our correspondent to an article on Farmer's Clubs in our last volume, page 62.—EDS.

We are engaged in a new subject, and have no one that has had any experience in such associations; and we are therefore in doubt as to what course to pursue to bring out the talent and experience of the several members of our club. On one point I believe there is but *one opinion*, that is we want facts, and the experience of the practical portion of our community, rather than mere speculations. The question is, How can this knowledge be drawn out, and made useful to ourselves and others? And what measures can we adopt to not only keep up, but to increase the interest now manifest among us? In large places I am aware that by means of shows, public lectures, and large pecuniary resources, it is not so difficult to do this; but are not these associations as much, or perhaps more needed, in smaller places than in larger ones; and cannot you, or some of your correspondents, suggest some course of action that will best secure the objects aimed at, in the constitution of our society? AGRICOLA.

Coal Ashes—Compost for Corn.

I have been experimenting in the use of *coal ashes* for potatoes. On half an acre I put nothing but such ashes; on an acre adjoining was spread a good coating of well rotted horse manure; and on another half acre adjoining both the preceding, nothing. Soil, a sandy loam. I found the coal ashes fully equal to the horse manure, the potatoes being very fine for the season. Where there was nothing, the yield was about *one half* what it was on the other portions,—both in quantity and size. I planted half a row with *diseased* potatoes, not a single sound one among them; but in the product I have not yet found the first diseased tuber.

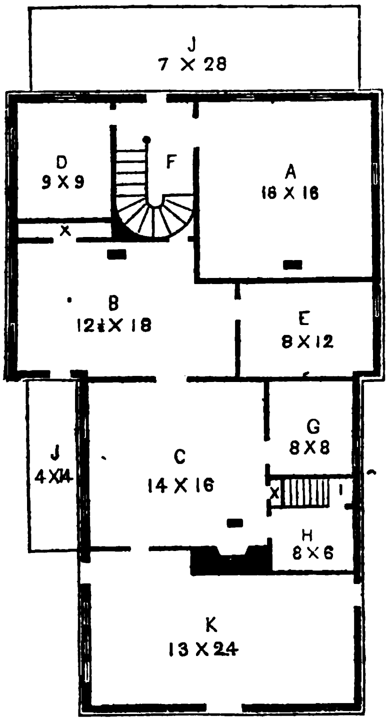
The following was my compost for corn, during the past season:—forty bushels of pigeon dung; forty bushels of hog dung, well-rotted, from beneath an old pen; ten bushels of plaster; and five of unleached ashes. A common handful was put in each hill. The corn was earlier by two weeks, larger ears, better filled, and more of them, but less fodder, than where I put fifteen large two-horse loads of barn-yard manure to the acre. The whole crop was in the same field, and the soil and tillage were alike in both parcels.

Brunswick, Col. Co. Pa. J. H. YOUNG.

Plan of a Farm House.

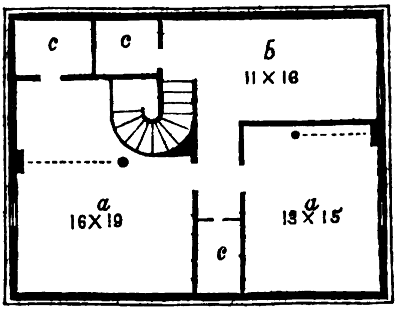
EDITORS CULTIVATOR—I transmit for your disposal the annexed plan of a dwelling, lately erected by myself, and which, in consideration of size—32 × 24, and 28 × 24, including wood house, I find conveniently arranged for family purposes.

The building is of wood, lined with brick; the front, or main part, has 15 ft. posts, the lower rooms 10 ft. high, and the chambers finished to the rafters till 7½ ft. in height. The back, or kitchen part, has 10 ft. posts, consequently no room above except a garret for rubbish.



First Floor—Fig. 20.

A, parlor; B, dining room; C, kitchen; D, bed-room, finished to correspond with A; E, bed-room, finished to correspond with B; F, hall, in which is a circular stairway that occupies only 2½ × 3 ft. space—under the highest side is the passage to the dining room, and the lower side admits under it a quadrant shaped hat stand, as shown by the fine lines; G, kitchen bed-room; H, pantry; I, cellar stairway; J, piazzas; K, wood house; ■, stoves; X. cupboards; O, false windows outside.



Second Floor—Fig. 21.

a, sleeping rooms warmed by the pipes that pass through the floor from the stoves below, and extend to the chimnies; the chiminies resting upon plank cupboards 5 ft. high: *b*, upper hall; *c*, closets.

Persons should conform their plan of building to the site occupied. The house here described fronts two roads, the one 8, the other about 75 rods distant; at a glance it is seen which sides should front the respective roads; therefore a plan adapted for one situation, is not for all. N. B. V. *Cayuga co., Jan.* 1, 1848.

Age of Cattle by their Teeth and Horns.

Some years ago, a gentleman presented at the cattle fair at Paris, Ky., a bull, as a two year old. The rules of this fair allow an animal to be presented as a two year old, until he is three; the fractions of a year not being counted; and this bull was nearly three by the certificate presented with him.

One of the judges, who had Youatts' Treatise upon British Cattle, contended that he was four years old, and that there must be some mistake or fraud somewhere.

The above circumstance induced me to examine a number of the cattle whose ages I knew; and the result was, that Durham cattle have their teeth much sooner than the ages specified in Youatt's Treatise. I examined none that were not six months for each year in advance of those marks. The two year old, would have the marks of three, and so of other ages. These cattle had all been well fed, and were large for their ages.

It is natural to suppose that cattle that come early to maturity, would cut their teeth sooner than those of slow growth, and this is found to be the fact.

Buffon says that cattle have a full mouth at three, Parkinson at four, and Youatt at five years old. There are other authorities for each of those periods, so that it is reasonable to suppose the observations of those persons were made upon different kinds of cattle. Good keep will make cattle look younger than they really are when judged by the horns, and older by the teeth. Poor keep will increase the rings on the horns and retard the cutting of the teeth. If an animal gets *very poor* the first winter, and is kept badly afterward, he will always have the marks on his horns of being two years older than his real age. If a cow has a calf at two years old, she will always show marks on her horns of greater age than if she had not bred early. SAMUEL D. MARTIN. *Colbyville, Ky. Jan'y* 1st.

Ravages of the Fly in Wheat.

There is one point upon which I do not recollect to have seen much written since I have been a subscriber to the *Cultivator;* that is, whether any remedy can be adopted to prevent the ravages of the *fly* in wheat in the fall. It has worked very bad this last fall, in that part of the State in which I reside; and my object in referring to the matter is to elicit information on the subject. If there is any known remedy, my own experience and that of my neighbors is, that where a top dressing of manure was applied previous to plowing the last time, they did not appear to injure it. Well, that would be a good enough preventive, if a sufficient quantity of manure of the right kind, or in the right state, could be obtained.

Wheat is the staple article with us, and any thing that will promote the successful raising of it, is what we need. It is the opinion of some of us, that the nit or egg of the insect is in the grain when sown. The principal reason assigned for that opinion, is the fact that the maggot begins to eat at the berry or grain, which in many cases is three inches under the ground; and it would seem that where a field has been rolled, it would be difficult for the fly to get down to the root to deposite the egg, or for the maggot to crawl down. In fact they are found at the root, or rather just above, when in the nit or egg state. Any thing published in the *Cultivator*, touching their case, may prove a benefit to this region of the country. SAMUEL ATHERTON. *Peru, Huron County, Ohio, Dec.* 14, 1847.

The opinion that the Hessian fly is deposited in the grain, we have good reason to believe is erroneous; if any insect has been found preying on the grain itself, we presume it was not the Hessian fly in any of its stages. The history of the fly is well known. The egg is deposited in the furrows of the upper side of the leaf of the wheat, near the ground. They hatch in a few days, and the larva crawl down into the sheath, and live on the juices of the plant. One generation of the insect is usually hatched in the fall, and another in spring. The eggs of that produced in the fall, are laid when the wheat is but a few inches high. When it is discovered that the wheat is attacked, it has been practiced in some instances, with good results, to feed down the crop closely with sheep, or other light stock. Dr. FITCH, in his excellent essay on this insect, recommends this course, and also suggests that a heavy roller passed over the wheat, might crush or dislodge many of the eggs and larva. He says "one or the other of the same measures should also be resorted to in the spring, if the same contingency occurs; or if the worms are, at a later date, discovered to be numerous at the first and second joints of the young stalks, the experiment may be tried of mowing as closely as possible, the most infested portion of the field." The operation of the manure, in preventing the ravages of the fly, we suppose to be simply that it produces a more vigorous growth of the wheat, causing it to tiller out faster than the insects destroy the stalks. Every one may have noticed that wheat on rich ground, tillers out much more than on poor land; on this account, or for the reason that it is sometimes too thick, on rich land, it is a common observation that the fly is no injury to wheat in such cases, but on the contrary may be an advantage by preventing it from being too thick.

Culture and Preparation of Sumac.

Being somewhat acquainted with the article of sumac, I am inclined to say a few words on the use and cultivation of it,—especially as the subject has been introduced by your correspondent "Zea."

Sumac was last fall, very high. Sicily being from $90 to $100, and American from $40 to $50 per ton.

I have been a manufacturer of Morocco, &c., for twenty years, and have bought from twenty to thirty tons of American sumac, and more than that of the Sicily, yearly.

The American is cured as follows: when the leaves have got their growth, which is from July to August, it is cut and cured as green as possible. The best way, if you have room in buildings, is to lay it round in them so as to dry. If it is too thick it will heat; it must be turned every day till dry; then thrashed and all the stems taken out, and nothing but the leaves taken to market. But if it is to be ground, the leaves and small stems are all ground together.

There are several kinds of sumac in this country, only one of which is used in tanning. It has a deep green leaf and a smooth reddish stem, and bears a deep red berry. There is another kind that is often gathered, but it is of little use, possessing very little tanning substance.

I think the Sicily sumac is another kind—it is a great deal stronger than ours. I have no doubt it might be cultivated here and made a profitable crop, as it will grow on poor land. The seed may be sown broadcast, but thin, and the crop mowed when it is full grown. It should be cut before the leaves turn red.

As I have become a farmer, I think I shall sow some in the spring, and see whether it can be made a pofitable crop. The chief advantage from the use of sumac in tanning, is that it makes the leather of a lighter color. THOS. GUEST.

Trenton Falls, New Jersey, January, 1848.

Origin of the Narragansett Horses.

EDS. CULTIVATOR—The following extract from Updike's "History of the Church in Narragansett;" a work which incidentally speaks of other things not relating to the church, furnishes, probably, the best account of the origin, decline and extinction of the famous Narragansett saddle-horses, that can anywhere be found. JAMES A. CHARLTON.

East Windsor Hill, Ct., Dec. 27, 1847.

"Mr. J. P. Hazard, in a communication to the author says:

'My grandfather, Gov. Robinson, introduced the famous saddle-horse, the Narragansett pacer, known in the last century over all the civilized part of North America and the West Indies, from whence they have lately been introduced into England as a saddle-horse for ladies. under the name of the Spanish Jennette.

'Gov. Robinson imported the original from Andalusia, in Spain, and the raising them for the West India markets was one of the objects of the early planters of this country.

'My Grandfather, Robert Hazard, raised one hundred annually, and often loaded two vessels a year with them and other products of his farm; which vessels sailed directly from the South Ferry to the West Indies, where the horses were in great demand.

'One cause of the loss of that famous breed here, was the great demand for them in Cuba, when that Island began to cultivate sugar extensively. The planters became rich, and wanted the pacing horses for themselves, and their wives or daughters to ride. They wanted them in greater numbers than we supplied them; and sent an agent to this country to purchase them on such terms as he could, but to purchase at all events. This agent never let a good one, that could be purchased, escape him.

'This, and the fact that they were not so well adapted to draught as other horses, was the cause of their being neglected, and I believe the breed is now extinct in this section.

'My father described the motion of this [kind] of horse as differing from others, in that its backbone moved through the air in a straight line, without inclining the rider from side to side, like the common racker or pacer of the present day. Hence the gait was very easy, and the horses being of great power and endurance, would perform a journey of one hunred miles a day, without injury to themselves or riders.' "

We are much obliged to Mr. CHARLTON for the trouble he has taken in procuring and forwarding the above facts in relation to the once celebrated Narragansett horses. We have never before been able to obtain a clue to their history.

The Andalusian horses of Spain were formerly held in high estimation. It is said they were carried into France many years ago, and that a cross from them produced the famous Norman breed, which is used in that country for stage-coaches, or "diligences." They were also carried, at an early day, into the Spanish settlements of South America and Mexico, and it is not improbable that the swift-footed "Canalos" of California, of which Col. FREMONT has given some account, (see last number of the Cultivator, page 31,) are descendants of the ancient Andalusian stock.

Col. CHAS. HAMILTON SMITH, in the "Naturalist's Library," thus speaks of the Andulasian horses: "The Andalusian horses are flexible, graceful and active, forming excellent manege or riding-school steeds, and very good chargers. They vary in color, but bays predominate, and next blacks and greys."

Of the South American stock, the same writer says:—"The South American horses are marked with most, if not all the characters of their Andalusian progenitors; they have their grace and good temper, and surpass them in speed, surety of foot, and bottom. Individuals taken on the Pampas have been known to carry a heavy man one hundred miles without drawing bit."

Of the Mexican branch of the family he says:—"The Mexican are known to be derived chiefly from Andalusian progenitors. * * They are a beautiful and sprightly race, of small stature and delicately formed, like roebucks, with handsome heads, the nose being slightly aquiline."

The origin of the fine breed of Andalusia is said to have been a mixture of the blood of the Barbs and Arabs from Africa, with the Spanish horses. During the occupancy of Spain by the Moors from the eighth to the sixteenth century, the horses from Africa were introduced in great numbers and mixed with the stock of the country. "This mixture," says Prof. Low, "was greatest in Andalusia and Grenada, and other kingdoms of the South, and there it is that the Spanish Jennette was formed and is still found with its pristine characters. These elegant little horses were greatly valued over Europe. They are stouter than the Barbs. but much of the same graceful and easy action. They are gentle and spirited, and capable of long and rapid journeys."

During the invasion of Spain by the French, the breeds of Spanish horses were much injured, and some of the best nearly ruined. In order to prevent the Spaniards from using the horses for cavalry purposes, it is said that Bonaparte's marshal issued an order to "disable, and blind the right eye of every serviceable horse in Andalusia."* The execution of this barbarous order, with the disasters incident to the French invasion, nearly deprived Spain of the noble race of horses for which she had long been celebrated.

Experiments—Lime and Plaster.

We are well pleased with the contents of the *Cultivator* in general; many of your correspondents furnish very interesting communications; but some of them, especially those detailing their experiments in farming, are so *indefinite* that they lose much of their value to the practical farmer. In order to derive much (if any) benefit from the experiments of others, we should know all the minutia of the operation, from its beginning to its end; for it frequently happens, that an apparently small error in repeating the process, will lead to a result entirely different to that which might have been anticipated.

We have observed one fact, relative to the use of *plaster and lime*, on the same soil at the same time, or shortly after each other. We have been using lime pretty freely for several years, and have repeatedly made experiments with plaster upon corn, for which the ground had been limed within from one to four years, and in no single instance was there the least perceptible advantage from the use of the plaster after the lime. The experiment was made by plastering several rows through the field, at a distance of from four to five rods from each other, and the result was uniformly the same—no difference in color, size or productiveness of those rows, over the rows intervening. How long this will be the case, and when gypsum will again be beneficial to the crops on land to which lime has been applied we are unable to say, as our experience in liming only extends to 1840. Perhaps you, or some of your correspondents, can tell us something about it. Joseph M. Nesbit. *Lewisburgh, Union Co. Pa. Jan.* 1, 1848.

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* Col. Chas. Hamilton Smith in *Naturalist's Library*.

Farmer's Town Associations.

Editors of the Cultivator:—Quite a number of the farmers of my township, (Danville, Iowa,) have recently formed an Agricultural Association for the improvement of the "Soil and the mind;" and as this is the first association of the kind that has been formed in our State, I wish to put it upon record, believing that such associations will increase so rapidly in the next five years, that we will be astonished to find that there was but one in the winter of 1847. Let me respectfully recommend to the farmers of the West, such associations. Besides receiving much valuable information from the agricultural periodicals of the day, it is a very pleasant way of spending a winter evening once a week with our neighbors and friends, discussing the topics with which we are best acquainted, and most interested in. J. A. Pinto. *Hartford, Io.*

Iowa as an Agricultural State.

Eds. Cultivator—I consider Iowa as first in point of natural advantages of any State in the Union for Agricultural purposes. Our prairie soil is a black vegetable mould, from one and a-half to three feet deep. The subsoil is a stiff clay. The Prairies are not generally over two to three miles in width, and the timber is good. There is, probably, about an equal proportion of prairie and timber.

We seldom or never have a failure in our corn crop, and vegetables of all kinds grow to an enormous size with little cultivation. Iowa is one of the best watered states in the Union for hydraulic purposes. Wheat some seasons is very abundant, but is frequently winter killed. I trust we shall find by close and practical observation, a remedy for this evil before many years. Corn being our staple production, it will naturally lead us to be a great pork-making people—and were we nearer the ultimate market for this great staple, or had we a direct railroad communication to the Atlantic states, in five years we would be second to no state in the production of pork.

We have made more fresh pork this season in Iowa, than our capitalists are able to purchase, and the difficulty of getting it to market, as well as the want of knowledge in regard to the number of hogs to be slaughtered in our state, has prevented eastern capital from finding its way here.

Consequently, the price is very low, and a majority of the farmers are packing their own pork. This should never be the case. Farmers can never put up their pork and send it to market as advantageously as men accustomed to that business. They should, and generally would be willing to sell at a fair price rather than have the trouble of packing and shipping for themselves.

I am astonished that more capital is not invested in our state in the growing of wool; from the experirince of all who have engaged in it, to any considerable extent, it has proved the adaptation of our soil and climate to this important branch of husbandry—and is found as lucrative as any other branch of agriculture. I am informed by a pretty extensive wool grower in my neighborhood from Washington County, Pa., that his sheep are not subject to many of the diseases here, that they were in Pa.

I do not think it probable that the eastern wool grower upon land worth $50 to $100 per acre, and hay worth $15 per ton, could successfully compete with the western, where land is worth $5 per acre, and hay $2.50 per ton.

We are only in the first year of our existence as a state, and the fourteenth as the inhabitant of a white man—still our population numbers between 150 and 200 thousand inhabitants, a great portion of them from the New England and Middle states; they are probably as well informed, and as industrious as the same number in any of our sister states; and all that we want to make us prosperous and happy, is the communication before spoken of with the east.

The health of Iowa, off the water courses, is as good as in any other state. On the water courses, we like all the west, are subject to fever and ague.

The ease with which we cultivate our prairie farms, would astonish our New England farmers. They would hardly believe that one man with a pair of horses, could cultivate forty-five acres of land in corn, and do it well; but this is not an uncommon occurrence.

We can raise 500 bushels of potatoes to the acre with no other work than to plow them twice or thrice, with the shovel plow after they are planted, that is, without the use of manure or hoe.

The shovel plow is the only tool used in the after culture of corn, and an average crop is from forty to sixty bushels per acre; besides, our corn fields are generally so well lined with pumpkins in the fall, that a man can walk on them all over his corn field.

I may add that I raised the last season 150 bushels of potatoes from two bushels, planted in one corner of my corn field, without manure or the use of the hoe. J. A. Pinto. *Hartford, Iowa, Dec.* 13, 1847.

Farm Buildings.

Every farmer is more or less interested in the construction of farm buildings; and I am glad to see the subject frequently alluded to in the *Cultivator*. Three essential requisites in a dwelling, are neatness, convenience and durability; and, as a general thing, the modern built houses possess these qualities in a greater degree than the unfinished "shells" of the last century. There is, however, often a failure in one respect, in modern buildings: the roof is frequently too flat; this may not be so great an objection, when it is composed of other materials than wood, but when made of wood it should always form an angle of *at least* thirty-five degrees.

As good shingles are becoming scarce in many places, various other materials are being substituted in their place, for covering certain out houses, where a rustic appearance is no objection. Sometimes boards and slabs are used. These make a tolerably tight roof, when sufficiently inclined, though not very durable; the dampness works in, and causes it to decay. A roof made in this way lasts only about 10 years.

A good roof may be made of sound well seasoned boards, about a foot wide and seven-eighths of an inch thick, laid crosswise the rafters, clapboard fashion.—This method requires the least possible quantity of lumber, and as the water wears across the grain of the wood, it is quite durable. The edges should be lapped over each other about an inch and a-half, and the ends about two inches. H. C. B., *Otsego Co.*, 1847.

Potatoes.

For the last two seasons I have planted my potatoes the last of May—had the ground plowed and furrowed the same as for corn. I take good, fair smooth potatoes and cut them lengthways, putting a quarter of a large, or half of a middling sized one in a hill. In this way I get large thrifty tops, which I consider necessary to insure large potatoes.

We cultivate with a three-shovel plow, working similar to a common cultivator; we hoe the potatoes to keep the weeds down, leaving the ground on a level, or but slightly raised about the hill. In digging, I find the potatoes near the stalks, and near the surface, which is the natural situation for them. Pink Eyes are apt to run out of a hill, and place themselves on the outside near the surface; but cultivated on a level they are found more compact about the stalks, and much time is saved in digging.

We in Illinois, bury many of our potatoes in the field. In the fall of 1846, I buried about forty bushels in one hole, ventilated at the top, until cold weather required the final covering necessary for winter. I had another hole, with about thirty bushels, covered without leaving any ventillator at the top, and but little earth over the straw; and a third hole, of about twenty bushels, covered with about eight inches of earth over the straw; all dug and put in within three days—the weather being warm and fine. A few days after, I was at one of my neighbors, and found them sorting over potatoes—the top of the heap being a rotten mass. The hole was covered about eighteen or twenty inches. I went home and examined heap No. 1, which was ventillated; it was dry, and potatoes all sound; No. 2, damp and swelling at the top; No. 3 was considerably rotten at the top of the heap.

I don't pretend that we can get the greatest quantity per acre, but I have obtained an excellent quality, and as good a yield as ever I had, planted in hills.

Dixon, Illinois, Dec. 24, 1847. N. WHITNEY.

Breeding Horses.

THE appearance of Mr. BURNET's communication in the January number of the Cultivator, seems to render it proper that I should endeavor to "define my position" in regard to a subject on which he thinks I have not been sufficiently explicit.

After Mr. B.'s remark, in the commencement of his article, that he had read my papers on Breeding Horses "*attentively*," it was not without surprise that I found he had entirely misunderstood me in relation to one of the most important points therein considered. Under the influence of this mistake, he supposes that I am "*privately* [?] inclined to take the breeds [of horses] we have already in our country—such as the Morgan, the Narragansett, the Canadian, perhaps, and the descendants of Messenger and Duroc, and breed them among themselves, to establish a sort of home-breed—a kind of 'horse of all work.'"

If Mr. B. will turn to the first number, and first paragraph, of my articles, (last vol. Cultivator, p. 169,) he will find it plainly stated that the object was to consider the "best mode of improving our horses for the carriage and road." By "carriage" was meant such a vehicle as is drawn by horses *on the road*, and perhaps the idea would have been better expressed by the question—How shall we produce the best *roadsters?* As this object, however, was thus set forth in the outset, and kept prominently in view through the whole series, I am at a loss to discover wherein I have given any grounds for the supposition that I am "*privately*," or otherwise, disposed to encourage the breeding of various stocks of horses "among themselves" for the purpose of producing a "kind of horse of all work."

In No. IV of my articles, (page 271, last vol. Cultivator,) it is said—"With regard to the best course for improving our horses for the carriage and road, the first object should be to preserve the best stocks now in the country. Such families as those above named, and others of value, should be bred with strict care, and sufficiently by themselves to ensure uniformity of character. It being the constant endeavor to breed them as much as possible to one standard or model, no blood should be admitted which would be likely to cause a deviation from it. This course should be pursued for many years, until the peculiar qualities of the stock become so fixed in the blood that they will be transmitted with a good degree of certainty."

Here it is, to be sure, advised to breed from stocks which "we have already in the country;" but it is by no means advised to "breed them among themselves" for the purpose of obtaining a "horse of all work;" on the contrary, it is recommended that the different stocks be bred by themselves, that is *separately*—or sufficiently so to "*insure uniformity of character*."

Mr. Burnet observes that "the existence of different species of horses, naturally suggests the idea that they were designed for different purposes; and that to combine the excellencies of all in one new and distinct species is, to say the least, by far the most difficult problem of breeding."

By substituting the word *breed* for "species,"[*] in the above quotation, it meets my cordial approbation, and I am not conscious of having said anything in opposition to the idea there expressed; on the contrary, the general tenor of my reasoning is in agreement with it. [See remarks on the different mechanism required for running horses and trotting horses—last vol. Cultivator, pp. 204, 205.]

As to the expediency of breeding from thorough-bred stallions, I should not, certainly object to the course, so far as Mr. Burnet has recommended it—viz: to produce from such a mare as he has described, a *city carriage horse*—"to drive about the city at a slow pace, to take the ladies a calling or a shopping."

I will say farther, that I would advise experiments to be made in breeding from thorough-bred stallions for other purposes, or for the production of roadsters, *provided* the right kind of stallions can be obtained. Observe that Mr. B. does not want "a mere scrawny *race* horse," but "*one that takes after the* OLD PATRIARCHS *of his family*—that is staunch and sound, with plenty of bone and substance."

But my object has been rather to lay down certain general rules for breeding, and to give points by which breeding-stock should be chosen, (see particularly No. V of the series, last vol. of the Cultivator, page 304,) than to recommend any particular blood; being confident that improvement would be most readily attained by the former course. EQUUS.

To Cookstove Inventors.

Amid all the numerous Railroad, and Telegraph, and Locomotive, and Air-tight cooking stoves, with their endless modifications, and astonishing improvements, the attention of the inventor seems never to have been directed to two very essential points. We have no convenient contrivance for heating *flat-irons*, without building a roasting fire, ninety-nine hundreths of the heat of which passes into the room and up the chimney, instead of into the irons. Two cords of wood per annum are consumed by my domestics in ironing, over and above what would be needed for the ordinary processes of cooking. A real roarer must be kept up whenever the irons are to be heated. Now, how much, think you, would be saved in the Empire State, by the invention and introduction of a contrivance to remedy this evil? Two cords of wood, cut, drawn, sawed, split and housed, cost, on an average, three dollars per cord—six dollars per year. A hundred thousand families in the State using cookstoves—very moderate estimate—swell the aggregate cost to the snug little sum of six hundred thousand dollars per year. It would be worth while for inventors to set their wits at work, would it not?

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[*] I have regarded the domestic Horse as of *one* species. According to naturalists, only *two species* of Equidae, the Horse and the Ass, are regarded as subjects of domestication.

The other defect, is the want of a good fixture for toasting bread. The inconvenience and difficulty every one knows, but nobody has yet, that I have learned, devised a good remedy. Who will take the subject in hand? A Manual Laborer.

Trapping Foxes.

Take some fine hay chaff, from a horse manger, and scatter over about one yard of ground, or on snow, in the open field, where foxes are apt to wander, as near the house as you can bait them. Then upon this chaff, which we call a bed, and around it for some distance, strew a handful of fine scraps for several nights, the refuse of tallow or lard.

At first the foxes will not approach the bed, but will shy around and pick up some of the fragments. Examine occasionally and replenish with a little new bait, if they have taken any. If on the snow, always pass by close to the bed in one direction, not making any extra tracks. In a few nights they will approach the bed and clear the whole ground of the bait.

The best size for a fox-trap, when set, will measure about five and a-half inches across the jaws. The springs should be made of the best steel, and not over five and a-half inches long, each spring. Rub over the trap a little tallow, and smoke it. Make a hole in the snow or ground in the centre of the bed, that when the trap is set, it will be a little below the surface.—Place a wad of loose tow or cotton under the pan, and cover over with dry ashes or sand that has been sifted. Then we spat these ashes down quite compact with a limber stick, say about eighteen inches long, and one inch wide, covering the pan and jaws of the trap, when pressed, about one fourth of an inch. It should be so set that a light weight would spring it. Scatter over, as at first, a thin coat of hay chaff, which is best done with a sieve. If there be snow, sift over the bed a slight layer, unless the trap be set during a gentle fall of snow, which is best; be careful not to make extra tracks about the bed; when all is done, scatter over the whole some fine scraps or toasted cheese, or both, throwing some bits about at a distance. When once well baited, if the trap be skilfully set, there is a fair chance of taking the fox, though he may be an "old one." I have seen many an one caught in this way, having had some fun myself.

A boy can tend two or three traps about as cheap as one. Level cleared land; in the woods foxes are more shy. If the trap be made fast, the fox when caught will make his escape by eating off his foot. A small chain should be attached about eighteen inches long, secured to a stone that will weigh about four pounds; this can lay under the trap when set.

A dead carcass, horse or other animal, makes a strong bait. Set two or three traps within ten rods. If the ground be free from snow, cover over with moss upon the ashes or dry sand, leaving the surface of the ground as natural as possible; make use of a little bait (as above advised) on the trap; the size of a walnut, broken up, is sufficient. You will take more game in this manner, than if set by the carcass, and not be annoyed by dogs.

Another mode of taking foxes is to bait them on a small piece of ground surrounded by water. So arrange it that the fox may leap into a natural or artificial bog, covered with moss, before he reaches the bait. The trap may be covered with moss only, on this small bog, leaving all as natural as possible; you are pretty sure to out-wit them in this manner.

If a trap be set for a fox burrowed in a den, he will not pass over it for some days, unless he be much famished; if there is any other possible way of escape, he is sure to find it.

Foxes deserve more credit than farmers usually give them. They are very useful in destroying mice and insects. If one should now and then, just take a fowl or a lamb, he may be severely punished, *when you catch him.* S. W. Jewett. *Weybridge, Vt., Dec.* 17, 1847.

Ashes on Corn.

Stable or yard manure must always stand at the head of the list of fertilizers, for value and universality of application; but gypsum, ashes, lime, bones, &c., will be more or less valuable as auxiliaries. In some cases the effects of the latter may not be sufficiently great to be striking or apparent; in others they are quite conspicuous. An experiment with ashes, by Wm. Van Deusen, accurately conducted, is detailed in a late number of the Gen. Farmer. The soil was a light, thin sandy loam on a hard-pan bottom. Ashes was applied to the hills of corn, after planting, at the rate of 3½ bushels per acre. Two rows, precisely like the rest in every respect, were left unashed. The following are the results, which we have condensed into tabular form; two rows being taken on each side of the two unashed, by way of comparison:

	product.	hog-corn.	good corn.	per acre, in ears.
Unashed,	166½ lbs.	45½ lbs.	121 lbs.	49 bu.
Ashed, west side,	207¼ "	29¼ "	178 "	72 "
Ashed, east side,	205 "	27½ "	177½ "	72 "

Thus it will be perceived that the ashes gave 23 bushels of ears more per acre; the whole gain on the five acre field where the experiment was tried being 115 bushels—besides the increase of fodder—all for 17½ bushels of ashes. The soil was evidently of that character which is most benefitted by the application of ashes. On heavy rich land the result would doubtless have been far less obvious.

Depth of Manure.

Considerable discussion is going on in the papers, relative to the proper depth to bury manure. Some assert that its best parts descend, and therefore it should be but slightly covered; while others maintain that nearly the whole strength becoming gaseous, rises, and it must therefore be buried deep. All this difference of opinion results from the attempt to make a rule that shall apply to all circumstances.

One farmer applies manure to the surface of a newly plowed field late in the spring, and harrows it in. Hot and dry weather follows, and being only partially covered, much of it escapes in vapor and is wasted; the few light rains which occur are insufficient to wash much of the soluble portions into the soil, it never reaches the roots of the crop, and consequently produces little or no effect. Again, he plows it deeply into the soil, and the reverse in every respect takes place. Hence he becomes thoroughly satisfied that manure should *always*, under all circumstances, be buried deep.

Another farmer applies his manure late in autumn, to the surface. Cold weather prevents fermentation, and the enriching portions which otherwise would escape in vapor, is washed by the abundant rains, in the form of liquid manure, into the soil; and by the usual time of plowing in spring, the surface of the soil for a few inches, is saturated with the most fertilizing parts, the plow turning under the rest. All is thus saved; and the farmer is convinced that surface application is *invariably* the best.

They "both are right, and both are wrong." They should act according to circumstances. Every farmer is aware, by the smell, that but little manure escapes from his yard in winter, but much in summer. Hence in winter and in late autumn and early spring, manure may safely lie at or near the surface, and its soluble parts will descend deep enough into the earth. But in a dry soil, and during a dry warm season, it can scarcely be plowed to deep, for benefitting the roots of plants. Indeed, by a shallow covering, it will be likely to do no good at all, the moisture of the earth being insufficient to dissolve it, and hence the reason that manure in dry seasons sometimes does more harm than good. And hence, too, why a thorough harrowing, to break it fine and mix it with the soil, after it is spread, and before plowing in, is found so useful.

Manure.

Good farmers know the great gain resulting from applying the manure which is made during the winter, to the corn and other spring crops. If left to ferment in the yard through summer, one half at least of its value is lost in vapor, &c., and the corn crop receives none of its benefits. But if plowed under in spring, the corn is enriched, the vapor as it escapes is absorbed by the earth, and a double benefit is thus received. But a difficulty occurs where corn fodder is largely fed, which mixing with the manure binds it together so that it cannot be drawn and spread till the stalks have rotted. All this is obviated by cutting the stalks fine in a machine, and more nutriment is obtained from them by the cattle.

Sheep manure is difficult to separate and load, being dry, hard, and crusty in its nature. In order that it may be separated by the fork, take a second-rate axe and chop parallel lines across the heap a foot apart, and cut these again at right angles, which will give blocks a foot square, which may be easily loaded and drawn.

When manure from its coarseness must necessarily be left to ferment a few weeks or months, much of its value may be saved by mixing it, or merely covering it with plenty of muck, turf, earth, saw dust, &c., with gypsum, unslacked lime, and other ingredients of good compost. Gypsum is usually regarded as one of the best absorbents of the gasses of manure; but in drawing out the most fœtid of all manures, we have found covering it with air-slacked lime, far more effectually to destroy the unpleasant odor, than the use of gypsum.

Advantages of Agricultural Associations.

The following judicious remarks, are taken from a preamble to some resolutions passed at a late meeting of the Yates County Agricultural Society. A copy of the proceedings as forwarded to us by the secretary, but we have only room for this extract:

"It is conceded by all classes that the science of agriculture is, of all subjects, the most interesting, and, indeed, absolutely necessary to the existence of the human family; therefore it should claim the greater share of their attention. It is a self-evident truth that in union there is strength, and that by associated action the standard of agriculture may be very much advanced among us, not only in theory, but in attaining to more perfect and certain results in practical farming than we have yet aspired to. Knowledge, the motive power of every science, must be brought to bear upon this subject. This can only be done in the science of agriculture by experiments—these must be extensive, and carefully and accurately compared, until effects can be traced to their causes. Agricultural knowledge can in no way be so well disseminated, and experiments so well compared, as by agricultural societies."

The Corn Crop.—In 1845, it was 417,800,000 bushels in the United States. In 1847 it is estimated at 600,000,000.

Answers to Inquiries.

Tares or Vetches.—J. M. N., Lewisburgh, Pa. By reference to the March number of the *Cultivator*, for last year, page 84, you will find out what these are and what are their uses.

Straw Cutters.—S., Jordanville, N. Y. A cutter for corn-stalks &c., is manufactured by Wheeler & Co., and for sale at the Albany Agricultural Warehouse, that might answer your purpose. There are two sizes—for hand-power and for horse-power—the price of the former, $16, and that of the latter $25. A drum may be attached to the smaller machine, by which it may be propelled by horse-power.

Composition for wounds made in Pruning—A. C., Edgartown, Mass. The recipe you refer to says: "Take a quart of alcohol and dissolve in it as much gum shellac as will make a liquid of the consistence of paint." As to the *quantity* of gum shellac, it appears obvious that it is necessary to apply it till the mixture becomes "of the consistence of paint." Keep the brush in water when not in use.

South Down Sheep.—C. C., Meriden, N. H. The average dressed weight of South Down sheep, may be set at from sixteen to twenty pounds per quarter. The mutton is of the finest quality. The price of ewes here would be from ten to fifteen dollars each. The wool sells readily at about the price of half-blood Merino. The South Downs are rather more likely to shed their wool than Merinos. A cross of the Bakewell or Leicester and South Down, would fatten as well or better than either breed, in its purity.

Steel teeth for Cultivators.—J. A. C., Grand Isle, Vt. Steel teeth for Cultivators can be had at the Albany Agricultural Warehouse, at 62½ cents each, or cultivators with the same kind of teeth, suitable for one horse, can be had at $7½ each. They are of the kind that is used in the western part of the State for working summer fallows. The teeth are fastened by a key, and may be readily taken out and placed in another frame—the same teeth answering for a cultivator for one horse, or two or three horses.

Swamp Muck.—O. P., Canandaigua, N. Y. The information you ask for is given very fully in the October number for last year.

Stallion.—"Baltimore, Md." Such a stallion as is inquired for, of the Morgan or the Morse's Grey stock, would cost from $400 to $800—according to quality and value.

Tar Paint or Gas tar.—J. W., St. Stephens, Alabama. The article advertised as "tar-paint," is produced from anthracite coal in the process of making gas. It is generally used about the consistency of common paint, and is applied to the outside of buildings, such as barns and stables, also to fences, bridges &c. A common whitewash brush is used for laying it on. The coal-tar is also used as a coating for iron, but for this purpose it is boiled to the consistency of pitch.

Buckthorn Plants and Seed.—J. W. P., Wyoming, N. Y. This seed can be had at the Albany Agricultural Warehouse.

"A Cord of Manure."—J. I. K., Sing-Sing, N. Y. In measuring manure by the cord, the same rule is adopted as in measuring wood—that is, 128 cubic feet make a cord.

Cranberries.—J. I. K. We notice that Mr. Winthrop Low of Essex, (Mass.,) obtained a premium last fall for a crop of cranberries, and we presume he could furnish roots, but at what prices we do not know.

☞ Answers to several other Inquiries will be given in our next.

Notices of New Publications.

TRANSACTIONS OF THE WORCESTER COUNTY HORTICULTURAL SOCIETY; by GEORGE JAQUES, Worcester, Mass.

This work contains an account of the origin of the Worcester Horticultural Society, with a full record of its doings from the time of its organization in 1842, to the present time; together with a statement of its financial concerns, notice of the library, abstracts from the reports made at various meetings, list of officers and members, &c. This society has been of great service to "the Heart of old Massachusetts," as the county where it is located has been called. We have witnessed some of its exhibitions, which were of a highly interesting character; and we are glad to hear that a general conviction of the usefulness of the Society, has induced a liberal support. We trust its operations will continue to be unimpeded.

TRANSACTIONS OF THE ESSEX (MASS.) AGRICULTURAL SOCIETY.

We are indebted to JOHN W. PROCTOR, Esq., the president of this Society, for a copy of the Transactions for 1847. It contains several excellent papers, some of which we shall notice hereafter. It is got up in a model style, and furnishes a good example for other societies.

FARMERS' LIBRARY AND MONTHLY JOURNAL OF AGRICULTURE.

This work is progressing in its third volume. It consists of two parts—the first being a re-publication of foreign standard works relating to agriculture; and the second and miscellaneous department, consisting of editorial articles and communications, from correspondents. In the first, or "Library" part, there have been re-published—"Petzholdt's Agricultural Chemistry," "Thaer's Principles of Agriculture;" and there now is in course of reprint, "Stephens' Book of the Farm." The work is under the editorial charge of JOHN S. SKINNER, Esq., well known as the founder, and for many years the conductor of the old *American Farmer*—the first agricultural paper in this country. It is published by GREELEY & MCELRATH, Tribune Buildings, New-York. Terms $5 a year.

A TEXT-BOOK ON AGRICULTURE: by N. S. DAVIS.

Dr. DAVIS states that he was incited to write this work by the offer of a premium by the New-York State Agricultural Society, for the best text-book on agriculture. Circumstances, however, finally induced the author to withdraw his name from the competition for premium. A "*text book*" of agriculture, which shall be in all respects beyond criticism, is a work requiring no small amount of knowledge, both of the *principles* of agriculture and its practical details. We have had but little time to examine Dr. DAVIS' work, but shall endeavor to present a notice of its contents and character in our next number. It is published by S. S. & W. WOOD, New-York.

COPEMAN'S VETERINARY TABLET, being a synopsis of the Diseases of Horses, Cattle and Dogs; with their Cause, Symptoms and Cure; by ARTHUR S. COPEMAN, Utica.

This table appears to be arranged with much judgment. Most of the diseases to which horses, cattle or dogs are liable, are here mentioned, and prescriptions given for their treatment. By the aid of observation, and some knowledge of the animal economy, we think it would prove very useful.

AMERICAN JOURNAL OF AGRICULTURE AND SCIENCE.

This publication, heretofore under the charge of Messrs. EMMONS & OSBORN, is hereafter to be conducted by C. N. BEMENT, Esq., who has for several years been extensively known as a writer on agricultural subjects. We are informed that he is to be assisted in the present work, by "several scientific gentlemen and practical agriculturists." The number for January contains contributions from JAMES EIGHTS, WM. BACON, and WM. R. PRINCE. It is published Monthly, at two dollars a year.

AMERICAN JOURNAL OF SCIENCE AND ART.—This excellent work, conducted by Messrs. SILLIMAN & DANA, is eminently deserving the patronage of the friends of science in this country. The number for January last has been received, and contains several articles of interest and value, among which are the following: Account of some Researches on the Protein Bodies of Peas and Almonds, and a Body of a somewhat similar nature existing in Oats; by Prof. JOHN P. NORTON: on the Resistance presented by Fluids to Electric Conduction; by Prof. EBEN N. HORSFORD: Fossil Footprints of a New Species of Quadruped; by JAMES DEANE: on the Depth and Saltness of the Ocean; by Capt. WILKES, U. S. N. The Journal is published on the first day of every second month, at New-Haven, Ct.—Price $5 a year.

MAINE FARMER.—This is one of the oldest of our agricultural publications. It was commenced in 1833, and under the editorial guidance of Dr. E. HOLMES, has "pursued the even tenor of its way" through various vicissitudes. In the fifteen years of its existence, it has been of incalculable advantage to the people of Maine, by encouraging a taste for agriculture and horticulture, and by teaching that the State is capable of supporting a thrifty population from other sources besides *pine timber*. The *Farmer* is now published at Augusta, by RUSSEL EATON, and in typographical execution and neatness of appearance, is not excelled by any other paper of the kind in the country.

Diseases of Animals, &c.

SCRATCHES IN HORSES.—This appears just above the hoofs, behind. Wash well with warm soap suds, and then with beef brine. The writer has speedily cured bad cases in this way.

BOTS IN HORSES.—A correspondent of the N. Y. *Spirit of the Times* gives the following recipe for the cure of bots and cholic in horses:—Take from a pint to a quart of castor oil, mixing in it as much fine table salt as it will take; bleed the horse in the mouth, and when bleeding freely, pour the above down, blood and all.

CARE OF FRESH COWS.—Two to four quarts of wheat bran are found to be one of the best things to give a cow after calving, to facilitate cleaning.

BLOODY MILK.—A correspondent of the *Genesee Farmer*, says his cows all suddenly gave bloody milk, as he supposed, to his own great anxiety, but joy to the pigs, until he found out that it resulted from feeding them red cabbage, of which he happened to have a large quantity—the blood ceased when the cabbage was gone.

Be certain to keep your diseased animals, no matter of what kind, if you have any, away from the rest of your stock. Diseases are frequently contagious, and the sickly or weak can be better cared for when separated from the rest of the herd.

DEATH OF AN OLD HORSE.—A horse called *Charles*, forty-five years old, died on Staten Island on the 12th of December last. The Spirit of the Times states that he was the property of the late O. MAURAN, Esq., of New-York, and that he was bred at Horse Neck, Connecticut, in 1802.

SHEEP-STEALING DOGS.—It is said that if a few of the sheep in a large flock are furnished with bells, the dogs will not attack the flock, a dog thief being a cowardly, sneaking animal, and afraid of noise.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from Agricola, L., Joseph M. Nesbit, L. J. Platt, J. H. Young, H. A. Parsons, F. Holbrook, A. Coffin, Oneida, J. A. Chamberlain, John Williams, J. A. Pinto, N. Whitney, Thomas Guest, Chas. Beasley, S. S. Morehouse, S. D. Martin, J. B. Burnett, Geo. Jaques, Wm. Bacon, A. S. Copeman, H. Junius, H., A. C., E. V. Dox, Alfred Young, Jos. Watson, C. L. Taylor, A. D., P. S. Alricks, T.

Books, Pamphlets, &c., have been received as follows:

A Discourse delivered at the Plymouth Church, Brooklyn, on Thanksgiving-day, by Henry W. Beecher.——Transactions of the Worcester County Horticultural Society, from its organization to 1847, by Geo. Jaques.——The Architect, a series of original designs for Domestic and Ornamental Cottages, by Wm. H. Ranlett, Architect, Nos. 1 to 9 inclusive.——Annual Report of the St. John (N. B.) Ag. and Hort. Society, from the President, R. Jardine, Esq.——Estimates of appropriations for 1848, by the Secretary of the Treasury, from D. Gold, Esq.——Catalogue of the Officers and Students of the Western Reserve College, Hudson, Ohio.——Copeman's Veterinary Tablet, by A. S. Copeman, Veterinary Surgeon, Utica.——Transactions of the Essex, (Mass) Ag. Society, for 1847, from J. W. Proctor, Esq., President of the Society.——Dombey and Son, Nos. 13, 14 and 15, of Lea & Blanchard's illustrated edition, from the publishers, Philadelphia.——Transactions of the New-Haven Co. Hort. Society, for 1847.——*A Text Book on Agriculture*, by N. S. Davis, M. D. *Published* by S. S. & W. Wood, New-York.——Address of S. A. Law, Esq., before the Delaware Co. Ag. Society.——Congressional Directory, from D. Gold, Esq.

J. G. C.—The official character of the paper to which you reply, induced its publication; and as we prefer not to open our pages to the discussion of questions which are claimed as party questions, your favor is respectfully declined, as its insertion would probably lead to a discussion, inappropriate to our work.

R. P. Jr. Malta, O.—We can send you any of the vols. of the work you want.

Rat-Proof Granary.—A correspondent at Baltimore, Md., wishes to obtain a plan for a "corn-house and granary," that will be rat-proof, and capable of holding from 200 to 300 barrels of corn. We should be pleased to receive the suggestions of farmers in relation to the matter.

The Winter.—The weather up to the first week in January was remarkably mild, as will be inferred from the fact that the steamboats made several trips between Albany and New-York, from the second to the fifth of the month. The ground was not frozen. Mr. L. V. V. Schuyler, of Watervliet, states that he plowed several acres on the first, third and fourth of January, and found no obstruction from frost.

Cisterns above-ground.—A correspondent wishes information through the *Cultivator*, in regard to constructing cisterns above-ground, which he has heard are common in some parts of the country, and are better than those built under-ground.

Preservation of Grapes.—We lately saw some very fine Catawba grapes, raised by Mr. E. Dorr, of this city, and preserved by Mr. D. K. Vanderlip, in *ground cork*. The fruit has nearly the freshness of appearance and sprightliness of flavor, that it had when first picked from the vines—being decidedly the best we ever saw at this season of the year. The cork is thought to be the best material for this purpose that has been tried. We should think it might be well prepared in one of Pitt's corn and cob cutters.

☞ We have received from Mr. Vance, of Groveland, Livingston county, specimens of an apple of which he gives the following history: The original tree was found in the woods, in the town above-mentioned, by Mr. L Dunn, was taken up by him and removed to his place in the year 1796 or '97, where it is now standing. The fruit is the same that was forwarded us by Mr. Johnson a year or two ago, which we pronounced the Herefordshire or Winter Pearmain, and it certainly has nearly all the characteristics of this variety. This is not our own opinion only, but that of several good judges who examined and tasted the specimens with us. Still it may be a seedling—it may be a reproduction of the Pearmain from seed. We also received from Mr. V. samples of two other kinds of apples—one of which he received from a nurseryman as a Pearmain; it is not, however, any Pearmain that we are acquainted with. The other variety sent, we do not know.

Large Corn Crop—In our notice of the farm of Mr. John Johnston, near Geneva, in the September number of the Cultivator for last year, we spoke of a field of corn which had been planted with Emery's Seed-Planter. It was the latter part of June that we saw the corn, and though it was then very promising, it was impossible to calculate the yield which might be obtained. Mr. J. informs us, in a late letter, that it turned out a heavy crop. There was nineteen acres in the field, but from what was taken up by an open ditch, and what was occupied by trees, he thinks there could not have been more than eighteen acres in the field. Mr. J. says:—"I had 56 tons, 25 pounds of ears of corn. I regretted I could not spare time to weigh the stalks, when dry. On the whole it was the best crop I ever saw." A part of the field had been under-drained with tile. Mr. J. states that this produced far the best corn, though before it was drained it would neither bear grain nor good grass.

Remarkable Pig.—At the time of the Pittsfield (Mass.) cattle show and fair last fall, we saw a very fine pig, belonging to Mr. F. A. Willis, of that town; and learning from him that he was keeping an account of the food it consumed, we solicited the result for publication. It appears from his statement, that the pig was slaughtered the 20th December last, and that her dressed weight was 460½ lbs. Deducting from this amount four pounds, which it was supposed the pig would weigh when she was dropped, leaves a gain of about one pound seven ounces per day, during her life. Her food was thin skimmed milk from one cow, with oat and rye meal mixed. Mr. Willis owned her 217 days; and when he bought her she weighed 20 lbs.—her gain in that time was therefore 435 lbs. The grain or meal was all purchased, and the actual cost of everything consumed, excepting the waste slops of the family, was a fraction less than $20, or about four and a quarter cents per pound.

Large Yield of Butter.—Mr. John Lossing, of this city has furnished us with the following account of the butter produced in seven days by a Short Horn cow owned by him. She calved the fore part of December; her calf was taken off at about a week old, and in the seven days succeeding, her milk afforded fourteen pounds of butter, besides the milk and cream used in a family of five persons. The food consumed by the cow in the seven days was as follows: "fourteen small bundles of top-stalks, three bushels brewer's grains, half a bushel ruta-baga turneps, four quarts of shorts." The milk used in the family is considered equivalent to one pound of butter.

Mount Airy Agricultural Institute.—By reference to our advertising department, it will be seen that Mr. J. Wilkinson has removed his agrictltural school from Dutchess county, N. Y. to Mount Airy, the well known country seat of James Gowen, Esq., near Philadelphia. It will be seen that the new Institution is to be ready for the reception of pupils on the 20th of March. It has our sincere wishes for its success.

Sample of Wheat.—We have received from Mr. Jos. M. Nesbit, of Lewisburg, Pa., a sample of wheat of a variety lately introduced into that section. It is a red bearded wheat, the grain tolerably plump. We are told it ripens late, but it has not been cultivated in the neighborhood from which it was sent a sufficient length of time to ascertain its value. We do not know the variety.

Multicole Rye.—Several of our correspondents have requested us to send them small parcels of this rye by mail, which we hoped to have done; but we have not been able to obtain a spoonful of it since these requests were made.

Catalogues of Nurseries.—We have frequent calls for these catalogues, and nurserymen might promote their interests by sending us a few copies, free of expense, for distribution to applicants.

Holbrook's School Apparatus.—Mr. Josiah Holbrook desires us to say that he is in no way responsible for "Holbrook's Apparatus," purporting to be made by Holbrook & Co., of Ohio. He considers it essentially and mischievously defective and erroneous.

"Render," &c.—The article on "Curing Meat," credited by the *Mass. Ploughman* to the *Philadelphia Saturday Post*, and attributed by other papers to various sources, originated in the Cultivator—December number, 1844.

Winter Squash.—Mr. Samuel O. Tabor of Slatersville, R. I., gives us the result of the product of a piece of ground, 40 by 50 feet in extent, devoted to winter squashes. The yield was 700 pounds, of which 670 pounds were sold for $10. The product was at the rate of 15,900 lbs per acre, and at the price for which the above portion was sold, would be worth $237.31. The soil is described as "yellow loam"—the manure from the hog-yard. The squashes were of the striped crook-necked variety, and were planted in hills six feet apart.

Large Beets.—Mr. E. S. Salisbury, of Ellisburgh, Jefferson county, N. Y., informs us that he raised three beets of the scarcity variety, which weighed as follows: 14½, 15¼, 17 pounds. Several others in the lot weighed from eight to ten pounds each.

Scientific Liberality.—The Massachusetts Agricultural Society has ordered from Paris, at a cost of about $800, the figure of a horse of full size, so constructed as to admit of all the pieces being taken apart. These pieces represent the muscles, blood vessels, heart, lungs, and other organs, of their natural size and appearance. Such objects would be admirably adapted to agricultural schools, and would afford the pupils accurate and useful information, scarcely to be obtained in any other way.

Improving Grain.—B. P. Johnson says, in speaking of English Agriculture, in his Greene County Address, "Great care is taken in the selection of seed grains. In many instances, so much nicety is observed, that the earliest and most luxuriant heads are taken out by the hand, and carefully drilled in until the product is sufficient for use; and in this way some of the best varieties of wheat now grown in England have been secured."

Occupations of the People.—It is stated that the men of the United States are engaged nearly as follows:

Internal Navigation, ...	33,000
Ocean Navigation, ...	56,000
Learned professions, ...	65,000
Commerce, ...	120,000
Manufactures, ...	792,000
Agriculture, ...	3,720,000

Thus, farming occupies about three and a-half times all the rest; why then should not agricultural periodicals be taken in like ratio, in comparison with others, that men may become properly informed in the business which occepies nearly all their time?

"Quarter" of Grain.—In England, a ton is 2,240 lbs., a *quarter* of that 560 lbs, which is the weight of a British, or Imperial quarter of wheat, or 8 English bushels, the bushel being 70 lbs., thus 8 × 70=560. The U. S. bushel being 60 lbs., 9⅓ of our bushels constitute a quarter.

Exports of Corn.—From 1701 to 1819, they were often a million, sometimes two millions. From 1819 to 1845, they did not in any one year amount to a million. In 1846, they exceeded two millions, and in 1847, they exceeded *nineteen millions*.—But this, enormous as it is, is only a thirtieth of the whole crop of the country.

Green Crops.—The *American Agriculturist* says that a few years ago, he renovated "a miserably poor field," by allowing the spontaneous growth of weeds, and then plowing them in as often as the principal ones were going out of bloom.

Irrigation.—There is one fact connected with irrigation which should be borne in mind by those who practice it—that the beneficial effect is not produced when the water is allowed to *stagnate* and sink down in the soil, but it must be kept in motion in a current over the surface.

To exterminate Briars.—To eradicate briars which grow along fences, plow deep, and sow oats. When cut, plow deep as the briars appear, and they will soon become smothered out. No plant can live long, unless it can *breathe* through its leaves.

Potato Rot.—A writer in the Gen. Farmer says: "The Mercer seems most affected by the rot, the Pink Eyes next, the Merinos next, and the June potatoes least, or not at all"—probably ripening fully before the advent of the disease.

Profits of English Farming.—An European correspondent of the Genesee Farmer states, that although the farmers in England have to pay large rents, he thinks their nett profits are greater than those of American farmers, who own the lands they occupy. He thinks the principal reason is, that there is a good home market for nearly all kinds of agricultural productions; and that the same advantages can be reaped in America only by an extensive encouragement of manufactures; and that a distant foreign market for grain, with heavy drawbacks for frieght, cannot be depended on; and much less so for the smaller and less substantial products.

Profitable Dairy.—A farmer in Lancashire, England, lately realized a sum of money equal to $200, by the sale of 13¾ cwt. of cheese, the product of 13 cows, in 38 days—more than 50 cts. per day from each cow. The secret—the best cows, first-rate feed, and the best management in cleanliness, regularity, and in all other respects.

Onions.—J. W. Proctor, Esq., President of the Essex county (Mass.) Ag. Society, states that, from inquiries made, it appears that the average yield of onions in the town of Danvers the past year, (where

200 acres were cultivated,) was 180 barrels, or from 4 to 500 bushels per acre. That the average value for several years has been $1 per barrel. That the average cost of cultivating an acre of onions, does not exceed $75—leaving a net income from the land of $100 per acre.

Seedling Potatoes.—See advertisement of Rev. N. S. Smith of Buffalo, in this number.

A single grain of Barley, sown in a garden in England, in the spring of 1847, is said to have produced 75 stems, 50 good ears, 20 indifferent ones, and 1,795 grains of barley. The plant and its produce are preserved in the museum of the Royal Agricultural College.

Artificial Stone.—It is said that a process has been patented in England for making artificial stone of every quality, from artificial granite to statuary marble. The invention is stated to be founded on a chemical analysis of the natural varieties of stone. It is made of flinty and siliceous grit, rendered fluid by heat, and poured into moulds till cooled and hardened. The artificial stone has, as is stated, already been used for coping stone for variegated pavements for halls and rooms, stone ornaments—such as mouldings for friezes; also for grind-stones and hones. The invention is thought to be particularly applicable to the lining of cisterns and water-pipes—its vitreous qualities insuring cleanliness. The process of manufacture is said to be easy and cheap.

Lime and Plaster.—In Scotland, where the climate is so much more moist than in the United States, plaster or gypsum is of little use, but lime is very important. Gypsum is of great utility in the dryer climate of America; but would not a parity of reasoning show that lime might be used to excellent advantage on our wetest soils?

India Rubber.—It is well known that India rubber has been substituted for steel springs in rail cars and carriages. It is now found that railroad wheels, even for freight cars, are greatly improved if cast double, so as to admit a layer of india rubber between the two parts, one being within the other, which greatly lessens the heavy jarring occasioned by concussion on the rail.

Smut in Wheat.—N. Simons, of Castile, N. Y., states in the Gen. Far. that he took six fine heads of wheat, and three of them he rubbed out and sowed with as many heads of smut. The product was two-thirds smut, as was found by counting the heads in the crop. The other three heads were sown on a clean place remote from the others; not a particle of smut was produced. This experiment entirely accords in result with others, showing conclusively the importance of clean seed.

Roots on Drained Swamp.—The Mark Lane Express gives the result of an experiment made on the lands of Lord Stairs in Wigtonshire, on a morass which had in part for thirty years been cut over for peat, and sixty acres of which were found barely sufficient to pasture two cows and their calves. It was drained, pared, burned, limed, manured, and sown to oats, and yielded 40 bushels per acre. Next year it was top-dressed, with gravel and sand, limed, manured and plowed; a part sown to turneps, yielded 32 tons per English acre; and seven acres planted to potatoes yielded 460 bushels per English acre.

Whey for Cows.—The Herkimer dairymen give their whey to the cows, finding it more profitable than to feed it to their hogs. Most cows eat it greedily.

City Milk.—It is stated that the very unwholesome milk, which is so largely sold in New-York city, as "Pure Orange County," &c., and produced by closely imprisoned cows, fed on distiller's slops, may be known after a little experience by its peculiar and unpleasant smell. It is believed that a large part of the mortality among children in cities, is owing to the use of such deleterious drinks.

Wagon Grease.—Booth's patent grease for railway cars, might be useful perhaps elsewhere, being composed of tallow 8 lbs., palm oil 10 lbs., soda ¼lb., heated with a gallon of water till nearly boiling, and constantly stirred till down to 70° Fah.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Jan. 21, 1848.

FLOUR—Genesee per bbl. $6.06¼—Ohio and Michigan $5.06¼.

GRAIN.—Wheat, Western. per bu., $1.40—Corn, northern, 72a 75c.—Rye, 80c.—Oats, 45a46c.—Barley 90c.

BUTTER—Orange County, per lb., 20a22c.—Western, dairy, 14a16 c —Ohio 10a12c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $8.37½a$9.—Prime $5.37½a$6.

PORK—Mess, per bbl., $11.87a$12—Prime, dull, at $7.75a$8.

HAMS—Smoked, per lb., 7a7½c.

LARD—Per lb. 8a8½c.

HEMP—Russia clean, per ton, $225a$235.—American dew-rotted, $120a$140.

HOPS—First sort, per lb., 5a6c.

COTTON—New Orleans and Alabama, per lb., 7a10c.—Upland and Florida, 7a8¾c.

WOOL—(Boston prices,) Jan. 20.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,....................	40a45	"
" three-fourths blood fleeces,.........	35a38	"
" half blood do	32a35	"
" one-fourth blood and common,.....	28a30	"

MOUNT AIRY AGRICULTURAL INSTITUTE.

THE subscriber having rented the **Mount Airy Farm**, the late residence of James Gowen, Esq., with all its extensive and eligible appliances for the purposes of a *Farm School*, will remove his school, now the Duchess Agricultural Institute, of Duchess Co., N. Y., to the above place, where he will open for the summer term on the first Thursday of April next; after which it will be known as the Mount Airy Agricultural Institute.

The winter term will commence on the first Thursday of October. This farm, which is located on the Germantown road, 7 miles from Philadelphia, Pa., having been so long known as the model farm of the United States, the site being proverbially beautiful and healthful, a minute description is deemed unnecessary; suffice it to say, that it presents every inducement and desirable facility for the establishment and maintenance of an Experimental, Practical and Scientific Agricultural Institute.

The course of instruction will be such as to give the students every facility for acquiring a thorough knowledge of Scientific and Practical Agriculture, with the use of the best modern farm machinery and implements, together with a select farmer's library, including numerous Agricultural Periodicals. Instructions will also be given in all the collateral branches requisite to insure the great desideratum which it was the object of the founder and Principal to supply by an education commensurate with the exalted destinies of a landed interest.

Chemistry and the other Natural Sciences receive particular attention—lectures with full experimental illustrations being connected with each course. The Zoonic course will commence with the Horse, a perfect skeleton of which being provided for illustration.

The best facilities are also afforded, that those who desire may here acquire a Commercial Education, to the end that they may lay the foundation in youth of a future life that shall be agreeable, healthful and useful.

Fee for the year, $200, payable semi-annually in advance. This sum includes Tuition, Board, Washing, Fuel, and Lights. An extra charge of $12.00 per annum will be made for pupils not furnishing their own bedding and toilet furniture. The modern languages $10 each extra per term, as also drawing.

This Institution is under the patronage of the American Agricultural Institute, the Farmer's Club of the American Institute, and the Duchess Agricultural Society.

For further particulars address JOHN WILKINSON,
Principal of the Duchess Ag. Institute, Poughkeepsie, N., Y., and after the 20th of March at the Mount Airy Agricultural Institute, Philadelphia, Pa.

REFERENCES.

Jas. Gowen, Esq., Philad., Pa.,
Robert Ewing, Esq., "
Zebedee Cook, Esq., N. Y.,
Thos. McElrath, Esq., "
J. D. Williardon, Esq., N. Y.,
Rev. F. A. Farley, Brooklyn,
Sam'l Allen, Esq., N Y.,
G. A. Amaux, Esq.,
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H. Weed, Esq., Newburgh, N.Y
Cha's Bartlett, Principal Collegiate school, Poughkeepsie.,
Wm. A. Davies, pres't of Far. & Manufac'rs Bank, Po'keepsie,
M. J. Myers, pres't Merchant's Bank, Poughkeepsie,
Rev. H. G. Ludlow, Po'keepsie,
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Rev. S. Mandeville, Lagrange, N. Y.,
Hon. Alfred Conkling, Auburn,
Robt. Farley, Esq., Boston, Mass.
Wm. C. Gibbs, ex-goveror of Rhode Island, Newport, R. I.,
Geo. W. Dobbin, Esq., Baltimore,
R. W. Crookshank, jr., St. John, NewBrunswick.

Feb. 1, 1848—2t.

FRUIT AND ORNAMENTAL TREES, GRAPE-VINES, &c.

BLACK Hamburgh, White Muscat of Alexandria, Royal Muscadine or Golden Chasselas, Early White Sweet Water Grape Vines. strong plants, raised from single eyes in pots and shifted, roots two years old and abundance of them, stems one year old, 6 feet ripe wood, price $5 for 6—$9 per dozen: *Cash with the order*. Taken out of the pots, carefully packed, the roots with the balls of earth in moss, and forwarded from New-York as directed. Also, good one year old plants of the above and other foreign varieties, at $6 per dozen; and superior *Isabella* vines, 3 years old, for speedy bearing—$4 for six, and $7 per dozen: packed, &c. Also, other native varieties, and every description of *Fruit and Ornamental Trees*, *Shrubs*, *Vines*, *Plants*, *Roses*, *&c*. including the newest and choicest varieties, for sale *at moderate prices*, at the *Ancient* and *Real Linnæan Botanic Garden and Nursery*, late of *William Prince*, deceased, Flushing, L. I., near New-York. Descriptive Catalogues gratis, on application *post-paid*.

Feb. 1, 1848—2t. WINTER & Co., Proprietors.

TO ALL AMATEUR POMOLOGISTS AND NURSEREYMEN.

WM. R. PRINCE & Co., Flushing, have just issued a Supplementary Catalogue of Pears exclusively, stating the age, sizes, and prices; and also which are on Pear, and which on Portugal Quince stock. This will be sent to all *post-paid* applicants. It is scarcely necessary to remark, that such is the scarcity of the choicest kinds of Pears, that although found in numerous Catalogues, there exists but few suitable for immediate sales. Having anticipated the demand, we have at great pains and expense concentrated in our establishment *the largest and finest collection of Pears existing either in Europe or America*. Those who send orders early will be supplied *without a single omission*, and we urge purchasers to inspect our Nurseries and judge for themselves. Of all other Fruit and Ornamental Trees, Shrubs and Plants, we have a great supply, and especially of Evergreens.

Table Grapes.

We now offer the most estimable assortment of Table Grapes ever presanted to Amateurs, having culled the choicest from every country. An examination of the description in our Catalogue (36th edition) will satisfy every amateur on this point.

American Wine Grapes.

As our country has begun to develop its appropriateness for Vineyards, we have greatly increased our stock of the kinds of Grapes most suitable for that object, comprising 25 varieties, and will supply them by 100 or 1,000, at low rates. We have 20 varieties that are estimable for the table, several of which are equal or superior to the Isabella and Catawba. Feb. 1, 1848—1t.

ALBANY AGRICULTURAL WAREHOUSE,

Nos. 10 and 12 Green-st.

CONSTANTLY for sale at the above establishment, all the most approved Machines, Implements and Tools required by the Farmer and Horticulturist. among which are the following:

Horse powers and Threshing Machines.
Fanning Mills, Grant's and others.
Straw and Cornstalk Cutters—all kinds.
Corn Shellers of all kinds.
Mott's Agricultural Furnaces, all sizes.
Vegetable Cutters, Hay and Manure Forks.
Corn and Cob Crushers.
Fitzgerald's Patent Burrstone Mills.
Howard's and Freeborn's Mills, &c., &c.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5,000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15,000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. THORP & SMITH.

Syracuse, N. Y., Nov 1—6t.

N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATOES,

COMPRISING several sorts of Pinkeyes, Russets, Purples, Reds, Whites, Rareripes, Orange, and others not yet fully developed. All purely Seedling—the product of a careful and expensive experiment of six years with the seed from the balls and its Seedlings in alternate reciprocal culture *Reciprocal*, because in each rotation the seed improves the Seedlings, and the Seedlings the seed. By this method of culture these potatoes have acquired a *healthy* and *early* character, are *very productive* and of the *finest quality*. Having been for so many years in succession planted in April. (in their seed,) and early harvested, they have become *constitutionally* what they are, and with early planting, early digging; dry and airy storage, they will prove *sound* and *durable*—and the method continued, the development of new varieties and improvements will also continue.

Also, "N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATO SEED." This seed was gathered in the balls last September from a four acre crop of Seedlings, from improved seed sown in April last. Six years alternate reciprocal culture with its Seedlings, has given it an *early* and *very productive* character. It will produce Seedlings of the size of small birds, eggs as early as in May. Season favorable, with good culture, it will produce the first season sown, about 200 bushels per acre, a good proportion of marketable size, sufficiently mature for the table, and seed balls in abundance. Tubers of the weight of 12 oz. were quite common among the young Seedlings last fall, and on the roots of many single plants were found fully set and growing, hundreds of Seedlings, though when so numerous, mostly small. In addition, this seed is impregnated (by the pollen in the blows) with choice varieties, late from Germany, England, South America, Albany, Illinois, and home markets—mostly Seedlings, interspersed for that purpose in the field; and it will represent, when cultivated, all the distinct varieties grown in that field, besides an amusing freak of mottling, tinting, and originality. The seed may be sown in April like tomatoes, in a warm bed. Bleached cotton cloth, tacked on frames for potato beds, is better than glass. The beds should be open to warm rains and to all warm weather. The same hands in a given time will transplant with the young plants more ground than can be planted with tubers. (*Particular* directions accompany the seed.) These potatoes and seed were represented at the two last State and County Agricultural Fairs, and the first premiums awarded them. The cultivation of these potatoes and their seed will be continued at Buffalo with every possible improvement. Seedlings of approved varieties carefully packed in chaff, and delivered at the wharf or depot in Buffalo, $5 per bushel—$10 per barrel. Transportation safe from frosts after February. Seed per paper—sufficient to produce 10 bushels—$1, with directions. It may be conveyed by mail with double postage. Orders and communications, post-paid, will receive prompt attention.

Buffalo, Jan. 13, 1848—3t. N. S. SMITH.

Extract from the Report of the Committee on Vegetables at the last New-York State Fair.

"The committee on vegetables have reported, that for the greatest and best varieties of Seedling potatoes of approved varieties, they award the premium of ten dollars ($10) to No. 73, presented by N. S. Smith, of Buffalo, N. Y. These potatoes were grown by the Rev. N. S. Smith, of Buffalo, who has favored us with the manner of their cultivation and production. He has been six years cultivating them from the balls that grow on top of the vines; his method is the alternate planting of the seed and tuber or potato, taking care to select always the best varieties. He has presented at the Fair as a specimen of his crop this season, thirty varieties of Seedlings, all of them evidently of fine quality. His specimens of this year's Seedlings, from the seed of his best Seedlings, are very fine. He presents, also, fine specimens of Seedlings from seed of Seedlings grown last year in Prussia, Germany, and fine varieties late from South America. Mr. Smith is confident, and the Judges favor the opinion, that in his experiments a great improvement in the potato is already accomplished; and he hopes to be able to obtain permanently, potatoes not only of the finest quality, but perfectly sound and hardy. The judges would recommend the attention of farmers to his specimens on the ground, and also to his mode of cultivation." Signed by DAVID GRAY, Chairman.

WATER RAMS.

A SUPERIOR article of Water-Rams for sale. Price $15 to $18. A. B. ALLEN & Co., 187 Water-st., N. Y.

Jan. 1—2t.

SPRING WHEAT AND RYE.

SUPERIOR Spring Wheat for sale at $2 per bushel. Spring Rye at $1.75 per bushel. Also a complete assortment of Field and Garden Seeds of all kinds principally grown, and put up expressly for use. A. B. ALLEN & Co., 187 Water st., N. Y.

Jan. 1—2t.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: A *very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

For sale at the Office of the Cultivator,

FRUITS AND FRUIT TREES of America—illustrated edition, with Seventy colored Plates of Fruits—price $15.—Also, the cheap edition of the same work—price $1.50.

THE FRUIT CULTURIST, by J. J. Thomas—price 50 cents.

AGRICULTURAL IMPLEMENTS FOR SALE.

HORSE POWERS.—Taplin & Eddy's Circular Horse Powers. Price, $60 to $75; Wheeler & Whitman's Endless Chain do., single-horse, $75; double-horse, $100; Trimble's, Warren's, and Child's Cast-Iron do., $50 to $75.

GRAIN THRESHERS.—Wheeler's Thresher at $25; ditto with Separator, $35; Taplin & Eddy's Thresher, $40; Trimble's and Warren's do., $25; Whitman's and Pitts' Thresher, with Separator and Cleaner, for one or two horses, $100. Pitts' Thresher, Separator, Cleaner, and Horse-power, complete, $200.

CORN SHELLERS.—Corn Shellers to work by hand or other power. Price, $3 to $50.

STRAW CUTTERS.—Straw Cutters of various kinds, to work by hand or other power. Price, from $3 to $40.

GRAIN MILLS.—Grain Mills to work by hand or other power. Price, from $5 to $30. Do. of Burr Stone, from $50 to $125.

CORN AND COB CRUSHERS.—These grind corn and cobs together Price, $35 to $50.

SPICE AND COFGEE MILLS.—Several of these are of a new and superior kind. Price, from $2 to $10.

PLOWS, for the South and North.—Superior Plows of various kinds for sod and stubble land, from one-horse to six horse draft. Also, the Scotch Iron, Centre-Draft, Self-Sharpening, Side-Hill, Wet Meadow, Double Mould Board, Paring, and Sub-soil Plows, with common or patent dial clevis. Price from $2 to $20. The woods of the above plows are of choice white oak, and got out by patent machinery. The castings are of the best kind.

Also a complete assortment of all kinds of Agricultural and Horticultural Implements, Field and Garden Seeds.

A. B. ALLEN & Co., 187 Water-st., N. Y

Jan. 1—2t.

JUST PUBLISHED, AN ILLUSTRATED TREATISE ON DOMESTIC ANIMALS,

Being a History and Description of the Horse, Mule, Cattle, Sheep, Swine, Poultry, and Farm Dogs

WITH directions for their Management, Breeding, Crossing, Rearing, Feeding, and preparation for a profitable market. Also, their Diseases and Remedies, together with full directions for the Management of the Dairy, and the comparative economy and advantages of working animals, the Horse, Mule, Oxen, &c. By R. L. Allen, author of "Compend of American Agriculture," etc.

The above work contains more than FORTY ENGRAVINGS and PORTRAITS of improved animals, illustrative of the different breeds and various subjects treated in it.

The most minute as well as general principles for breeding, crossing, rearing feeding, and management of all domestic animals are herein given, to produce the utmost marketable value for the food and attention bestowed on them; as well as to prevent disease, and save the immense losses which annually occur from this source.

The diseases of animals are also fully treated, with their remedies, management, &c., &c. Published by C. M. Saxton, 205 Broadway, N. Y.

Price, 75 cents, elegantly bound in cloth.

New-York, Jan. 1, 1848.—3t.

THE AMERICAN ARCHITECT.

Published Monthly, at $3 per annum—Single numbers 25 cents—by C. M. Saxton, 205 Broadway, N. Y.

THE object of this publication is to introduce ORIGINAL DESIGNS of *Country Seats*, adapted to the varied tastes and circumstances of an American population—from the elegant Villa to the simple Cottage and plain Farm-House; from Planters' Mansions to Village Domicils. In a word, every variety of Rural Residences will be embraced in order to meet the views of every person desiring a Country House. In respect to style, cost, arrangement, finish, &c., utility will never be sacrificed: economy in the outlay, with an appropriate style, will always be kept in view. The requisite details, specifications, plans, and directions, with a careful and reliable estimate of the cost, will accompany each design. These are essential features of a *Practical Work*—and no labor will be spared in their preparation.

Of the diversity of human dwellings, whether marked by elegance, convenience, or utility, or by the want of them, none can compare in national importance and philosophical interest with the Farm House—the Homestead of our species.

The selection of designss by those about to build Country Residences, is commonly attended with embarrassment, and always with expense. When furnished by professional men from general ideas communicated by proprietors, they are seldom satisfactory. The American Architect, by furnishing a collection of designs adapted to all tastes and means, will remove every difficulty in the choice, and save money expended on plans of no use. It will furnish 12 Elevations, Plans and Specifications in each year, at a price not exceeding one seventh of the usual charge for one.

"The price is only 25 cents for each number, and it is surely next to impossible but that such a periodical will obtain a wide circulation."—*N. Y. Tribune.*

"This work promises to supply a want which has long existed, and to be of essential value."—*Salem Register.*

"This work cannot fail to be useful and popular."—*Boston Bee.*

"This is a good and beautiful work, and well adapted to effect a much desired reform in Am. Architecture."—*Boston Trav.*

The *cost* of building from the plans given, will be from $600 to $5000, with complete specifications from a first rate Mason and Carpenter, and the prices given can be depended upon.

New-York, Jan. 1—3t.

GODEY'S LADY'S BOOK AND FAMILY MAGAZINE FOR 1848.

INCREASED AND INCREASING ATTRACTION, with the largest circulation and greatest popularity of any Magazine in the United States.

New Department.—The Treasury

will contain articles from Bryant, Longfellow, Percival, Oliver Wendell Holmes, Washington Irving, N. P. Willis, Hoffman, Tuckerman, Simms, Halleck, Paulding, Mrs. Sigourney, Miss Gould, Dana, Herbert, Fitz Greene Halleck, Miss Sedgwick, Theodore S. Fay, from whom we have received a Novellette, which we shall shortly commence) Mrs. Annan, Park Benjamin, E. A. Poe, &c.

The most Beautiful Embellishments

From the hands of the first artists, and, consequently far superior to these in any other Magazine, adorn "The Book."

Ornament and Utility are Combined.

The popular series of articles on Health, Model Cottages, and Needle-Work, &c., illustrated with fine engravings, will be continued, and such other features as can be made subservient to the grand design of the work, the

Mental and Moral Improvement

of its readers, will from time to time be added.

Colored Fashions

every month, altered from the French to suit the more modest taste of the ladies of this country.

THIS IS THE BEST TIME TO SUBSCRIBE.—Persons commencing with the January number, will receive

Miss Leslie's new Novel,

now entire, as the portions already published will be reprinted in that number. No diminution in the usual interest and variety, but an increase in the number of the pages.

TERMS.

One copy one year, which includes "The Lady's Dollar Newspaper,"	$3 00
(Making three publications in one month, for the above small sum.	
One copy two years,	$5 00
Two copies one year,	5 00
Five copies one year, (with an extra copy to the person sending the order,)	10 00
Eight copies one year,	15 00
Twelve do do.	20 00

Any Postmaster or Editor of a Newspaper sending us two dollars for the Lady's Book alone, may retain the other dollar as commission. This commission cannot be allowed when the Lady's Book and Dollar Newspaper are expected for $3. Address

L. A. GODEY,

Jan. 1—2t. 113 Chestnut-st. Philadelphia.

THE LADY'S DOLLAR NEWSPAPER,

CONTAINING articles from the best writers of England and America, and translations from other languages. Also, all the

English Annuals Entire,

which cost in this city from $5 to $10 each. An Annual will be published in one number, which will cost about four cents to the subscribers of the Lady's Dollar Newspaper.

In addition to the above, the paper will contain Tales, Poetry, Essays, Feminine Accomplishments, Useful Receipts for the Toilet, (from a work which has been imported expressly,) Fashions, Health, Fancy Work, Housekeeping, Domestic and Fancy Cookery, from Soyer's great book, just published.

It will be seen that the subscribers to this work will receive twice a week for one dollar, that which in any other shape would cost them from $3 to $6.

TERMS.

Single copy one year in advance, $1; six copies, $5; thirteen copies, $10.

A copy of either work sent as a specimen gratis to any person who will pay the postage on the letter requesting it. Address

L. A. GODEY,

Jan. 1—2t. 113 Chestnut-st., Philadelphia.

COUNTRY SEAT FOR SALE.

THE elegant Country Seat, situate in the town of Livingston, Columbia county, on the New-York and Albany post-road, distant about nine miles southeast from the city of Hudson, and four miles east from the river—the late residence of Joseph W. Russell, deceased. The place consists of about 95 acres of highly cultivated land, and is well stocked with a great variety of choice fruit. The house is a substantial brick building, 60 feet by 40, well supplied with water from a large brick filtering cistern. The barns, carriage-house, ice-house, and other out-buildings, are large and commodious.

There are upon the place, wells and springs of pure water, at convenient distances from the house and barns.

The village of Johnstown, which is but a quarter of a mile distant, contains a church, school, post-office, &c.

The owner is willing to sell, *separately from the farm*, the Residence, with about twenty acres of land, embracing the entire ornamental part of the place; and including the garden, fruit trees, barn, carriage-house, ice-house, etc.

For terms and other particulars, enquire of

Albany, Dec. 1—6t. W. E. BLEECKER.

WANTED TO PURCHASE

SOME superior Potato Onions, for seed; any person having from five to twenty bushels for sale, will find a customer, by applying, (if by letter, post-paid,) to CHARLES SPRATT, Utica.

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GRAPE VINES.

10,000 Isabella Grape Vines; **6,000** Catawba do.; **4,000** Aleaxander or Muscadel do.; of suitable age and size for forming Vineyards. **1,250** Catawba Vines, four years old, will produce fruit in 1848, suitable for gardens. For sale in large and small quantities on the best terms. Purchasers of vines from the subscriber will receive, free of charge, a practical treatise (just ready for the press) on the cultivation of American Grape Vines, and the manufacture of Wines, treating particularly of soil, location, planting of vines, manuring, training and pruning, illustrated with plates. Vines will be packed so as to be sent to any part of the world with safety. Letters of inquiry, *post paid*, promptly attended to. Apply to B. G. BOSWELL,
Feb. 1—2t. 230 Pine-st., Philadelphia.

ENGLISH AND FRENCH GRASS SEEDS.

THE subscribers have just received from England and France, a superior lot of *fresh* Grass Seeds of various kinds. Among these are the Perennial and Italian Ray Grass, Sweet Vernal and Oat Grass, fine mixed Lawn Grass, White Clover and Lucerne, English Beans, Vetches, &c., &c. A. B. ALLEN & CO.,
Feb. 1, 1848—tf. 187 Water-st., New-York.

OSAGE ORANGE, YELLOW LOCUST, AND BUCKTHORN SEED.

THE above, together with a general and complete assortment of fresh Field and Garden Seeds, for sale by

A. B. ALLEN & CO.,
Feb. 1, 1848—tf. 187 Water-st., New-York.

SEED SOWERS.

FOR sale at the Albany Ag. Warehouse, a large supply of EMERY'S SEED SOWERS, on hand, and being made for spring sale. The manufacturer has been awarded the N. Y. State Ag. Society's first premium. He also received the first premium at the Fair of the Mechanic's Association, held at Boston in September last. Feb. 1, 1848. H. L. EMERY.

NEW AGRICULTURAL WAREHOUSE.

SAMUEL C. HILLS, No. 189 Water-st., New York, offers for sale Prouty's Plows and Horse Rakes, Wilkinson's Harrows, Corn Mills, Corn Shellers, Straw Cutters, Horse Powers, Churns, Grain Cradles, Scythes, Hoes, Rakes, &c., &c.

Patents secured upon moderate terms, and patent articles and rights bought and sold on commission.

New-York, Jan. 1, 1848—3t.

15,000 Buckthorn Plants.
10,000 Osage Orange Plants.
Also, Buckthorn Seed by the pound or bushel. For sale by
Feb. 1. L. TUCKER, Ag. Warehouse.

FINE BLOOD MERINO SHEEP FOR SALE.

THE subscriber being about to retire from the farming business, offers for sale his entire flock of Merino sheep, which have been bred with the greatest care from the best flocks in the country. Of these 75 are ewes now with lamb by a buck from the recent imported flock of John A. Taintor, Esq., of Hartford, Conn.; 25 bucks one year old last spring from the above ewes, sired by the Rambouillet buck Chancellor; and 50 lambs the increase of last year, sired by the Rambouillet buck Grandee, now owned by the Rev. L. G. Bingham, of this place. As to purity of blood, fineness and weight of fleece, and strength of constitution, they are excelled by no Merinos in the country. The buck purchased from the recent importation of Mr. Taintor will also be offered for sale. To those wishing to improve their sheep, or those wishing to start a good flock, the present offers a rare opportunity, as they will be sold without reserve. Communications addressed to the subscriber will receive immediate attention. THOS. D. CANFIELD.
Williston, Vt., Jan. 15, 1848—3t.

IMPROVED PORTABLE RAILROAD HORSE-

Powers, and Over-Shot Threshers and Separators.

HAVING sold about seventy sets of these Powers and Threshers the past season, many of which were purchased by some of the large wheat growers in this State, Vermont, Michigan, Illinois, Wisconsin, and Canada, and without exception having given entire satisfaction, (which was guaranteed in all cases,) we do not hesitate to recommend them to Farmers and Mechanics desiring such machines, as being in our opinion the most convenient, if not superior in all respects to any others now in use. Very many flattering testimonials have been received, several of them estimating the cost of threshing at less than one-half that with the ordinary sweep powers with from four to six horses. Having made arrangements for an extensive sale and supply for the current year, and with several improvements in their construction, and a better finished article, I am enabled to afford them on better terms, inasmuch as one-half the ordinary charges for freight during the months of navigation, will be allowed to any point on any of the canals within the State, and the same amount towards the freight if sent by any railroad. Some of the principal advantages of these machines are these:—The power itself occupies very little space, and is operates wholly, if desired, by the weight of the horse, the power being placed at an angle of ten to fifteen degrees only, according to the weight of the horse, which is found sufficient for threshing all grains, sawing wood, &c. It is comparatively light and portable, and can readily be handled by two men, and used on any common threshing floor, thereby securing ease and safety to both man and beast during stormy weather. The moving parts are very simple, as sufficient speed for all purposes is obtained with but one shaft, without geering; thus avoiding a great amount of friction which is unavoidable in most other machines in use. The Thresher is rather new in many respects, and has several important advantages over most others. By having an over-shot cylinder, it admits of a level feeding table, and the person feeding it also has the control of the horse, and by means of a brake, the power can instantly be checked or stopped by him with perfect safety, thereby often avoiding accidents. By this over-shot motion, all hard substances are prevented from getting in, avoiding the danger of spikes being broken and thrown out—not an instance being known of such accident. By this machine the grain is not scattered, but thrown upon the floor within three feet of it, and admits a separator to be attached sufficiently high from the floor for all the grain to fall through it, while the straw is carried quite over in good condition for binding, the straw not being cut, or grain broken. The cylinder is considerably less in diameter than most machines in use, and has only about one-third as many spikes, but double the number in the concave, which admits of greater speed with the same power; it is also several inches longer, which gives ample room for feeding it to much better advantage. The separator has been sold with each thresher, and is considered indispensable, as it makes a perfect separation of the straw and grain, leaving the latter in the best possible condition for the fanning mill. Three men with a single power can thresh 75 to 100 bushels of wheat or rye, or four men with a double power 175 to 225 bushels of wheat or rye, or double that quantity of oats or buckwheat, per day; and with fanning mill attached to the power, and one man to attend it, the grain can be cleaned for market at the same time.

For further particulars see Descriptive Catalogue of Albany Ag. Warehouse and Seed Store, furnished gratis at the Store No. 10 & 12 Green-st., or by mail to post paid applicants. Feb. 1, 1848.

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, MARCH, 1848. No. 3.

CULTURE OF INDIAN CORN.

EDITORS OF THE CULTIVATOR—It must be apparent to every one, that the aggregate value of the Corn Crop is immense to our country, and as almost every cultivator of the soil, throughout all its varied climate, and on all its variety of soils, is a grower of this crop to a greater or less extent, it becomes a matter of importance that it should be managed to the best advantage. I know of no better way to arrive at the desired result than the practical experience of successful corn-growers, made public through the columns of the agricultural press. We may all learn something from one another; indeed I never had a hired man even, in my life, however ignorant, that had not a way of his own of doing *something* from which I obtained a new and profitable idea. These considerations must be my apology for any apparent egotism in the frequent use of the personal pronoun in this communication.

I do not expect to add any thing new in information upon my present subject, which has been so often and so ably handled by others before me, but simply to show by what process I have been successful in raising much larger crops of corn to the acre than would be considered an average yield in this section, at least. The *average* yield of my corn crop, on 8 to 12 acres annually, has not fallen so low as 60 bushels per acre in 10 years, while in the more favorable seasons and on my best lands, it will come up to 80 to 90 bushels per acre. It is proper also to state, that some of the fields would not cut 500 lbs. of hay to the acre 10 years ago.

The land intended for corn is always broken up from 6 to 9 inches deep, varying with the quality of the soil, late in the fall, in order to that perfect pulverization of the soil which the frost of winter contributes so essentially to secure. The plowing is performed with great care and precision. No baulks—no crooked or imperfectly turned furrows are at all allowed, but the whole soil to the required depth is turned over. I have been troubled to find plows that do good work in a *deep* furrow—the Centre Draft and Eagle No. 2, a cut and description of which is given in the April number, vol. IV, of the Cultivator, turns a perfect furrow 8, 9 or 10 inches deep.

The heaps of compost manure are made up on this land in August or after, beds being plowed up to receive them. These heaps are ranged at convenient distances to load into the cart in the spring, and spread on the land with the best economy of travel, and contain 30 to 40 loads each, which is the quantity usually applied to the acre. Thirty-five to forty bushels is called a load. In the spring the manure is laid on the land in small heaps; the rows of heaps about four paces apart, and the heaps in the rows a little less distance apart, because a given number of loads, fine manure particularly, can be spread with more ease and expedition by making more heaps of a load, and placing them near together, than by following the more common practice of making larger heaps wider apart.

The harrow, going twice in a place, is started as soon as the workmen commence spreading the manure, in order that it shall be immediately incorporated with the soil without the loss of its valuable properties by evaporation, and also to divide and pulverize the soil above the sod, so that the plow afterwards may be used in a light furrow without disturbing it. Great improvements have been made in harrows by constructing them in two parts, connected together with hinges—the play, up or down, upon the hinges of either half, enables the harrow to adjust itself to the surface of the land in all places; and, whether smooth or uneven, it will always hug down close, and "keep digging." No farmer who has ever used a hinge harrow would be without one for five times the cost of making. When the harrowing is completed, the plow, with a sharp point, and a roller on the beam guaged to the proper depth, covers the manure 3 to 4 inches, which, after a trial of all ways, I consider about the right depth for fine compost.

The land is then furrowed out as nearly north and south as the shape and surface of the field will admit, and also east and west, the rows being 3½ feet apart each way. I prefer this distance to planting nearer. In my earlier farming operations, I used to plant corn considerably nearer both ways, of course growing a greater number of stalks and ears to the acre. In a favorable season, as to moisture, probably a few more bushels may be obtained by closer planting; but in offset the labor is also considerably increased. There are more hills to plant and hoe, and the ears being usually much smaller, the labor of husking a given number of bushels is greater, and no man can husk small ears and "nubbins" as fast as large ones. Besides, I find by actual experiment, that a closely planted field will not stand a drouth nearly as long as a field planted wider apart. Every stalk requires its due proportion of moisture from the earth in order to carry the ear of corn to full perfection, and of course the greater the number of stalks to the acre, the greater the draft upon the soil for moisture. In planting on a scale of 8 to 12 acres, therefore, I go for more space between the hills, notwithstanding there has been much said in favor of *shading the ground* by close planting, to prevent the effects of drouth. It is of considerable importance to have straight rows both ways, the use of the horse and cultivator being much more effective in this case than in crooked rows; besides, no farmer having a spark of honest pride, wishes to gaze all summer at so unsightly an object as crooked corn rows, or expose the same to the gaze of others.

In planting the corn, which is a nice operation, care is used to scatter it well in the hill, putting in 6 to 8 kernels. I always direct the planters to occupy 8 to 12 inches square with each hill. This may appear a small matter to some, but it is a fact that corn planted thus will ear heavier, and there will be more stalks bearing two good ears, than if the common practice of tumbling the corn into the hill at hap-hazard is pursued. Indeed one could better afford to pay a man two dollars a day to plant corn in the way I have recommended, than the common price, planted in the common way. The corn is covered at least 3 inches deep in sandy and gravelly soils, for two reasons. In this section of country we frequently have late spring frosts which nip the corn after it is up, and if covered but slightly the vitality of the tender plant is often destroyed by freezing down to the roots, whereas if covered 3 inches deep, no permanent injury is done. Again, we sometimes have dry weather about planting time, and if the earth drys down to the corn after it has sprouted, it may not come up at all; if it does it will be a long time about it, and at the end of three weeks will not be nearly as vigorous as that planted deeper. The seed is planted dry. I have tried a variety of steeps for seed corn, but have settled down to the impression that it is as well planted dry as any way. The most effectual "scare-crow" I have ever found, is a line of white twine strung round the field, and supported by long stakes.

In working the corn after it is up, the main dependance is upon the horse and cultivator. The construction of many of the cultivators in use is faulty. The upper part of the tooth is so short, and the frame work in consequence is brought so near the ground, that the implement goes bobbing about over the top of the weeds, clogging up with every impediment it meets—the weeds of course are not cut off or rooted up in a thorough or desirable manner, although I grant they are somewhat *mangled*. In a future communication I may give a drawing and description of a cultivator, made at my suggestion, by an ingenious blacksmith in this place, which is not liable to the above objections. At weeding time the horse and cultivator pass through the rows both ways, perfectly pulverizing and mellowing the soil, and as the rows are *always straight*, the soil is worked up close to the hills each way, rendering the labor of weeding with the hoe comparatively light. The corn is again worked both ways with the horse and cultivator at the second hoeing, the feeble stalks are pulled out, leaving 4 to 6 standing in a hill, and a broad, *flat* hill made. I find it cheaper for me, so far as labor is concerned, to earth up a little than to hoe perfectly level, and the hills being made broad and flat, it is, for anything I can discover, equally as well for the corn.

I never hoe but twice. Having plowed the land the previous autumn, nothing green started up before the winter set in, and the frost immediately following, the grass roots were killed. In the spring the land was well harrowed and plowed above the sod; there were no seeds of weeds in the manure, it being well fermented compost, and thus the work of the season was in a great measure *done* before the seed was planted. After the second hoeing the corn has the entire occupation of the ground, no further trouble being experienced from weeds of any kind. The thorough working of the land before planting, and also by the use of the horse and cultivator through straight rows *both ways*, at the first and second hoeing, has the further advantage of bringing the corn along through the fore part of the season with great rapidity, which is of essential importance, particularly in our northern latitudes.

There is no variety of corn that is not either improved or deteriorated by the manner in which the seed is selected. As soon as the earliest ears are thoroughly glazed, I go over the field, selecting those for seed that are early and vigorous, and from stalks producing *two good* ears. The corn is immediately braided up and hung in a dry, airy place. I have a kind of very long-eared, eight-rowed corn, which I have planted for several years, selecting the seed in the field each year in the way described, and which will yield a quarter more, the quality and cultivation of the land being the same, than it would when I began raising it—the corn is also at least ten days earlier in ripening. At first it was difficult to find double eared stalks, but now, it would seem to an observer in passing over the field, that a large proportion of the stalks produce twin ears measuring, the two together, 24 to 26 inches in length; many of the single ears will measure 14 or 15 inches long. Of course no kind of corn can produce to any extent, two ears upon a stalk, of this length, unless the land and cultivation are both good. It is to be hoped there is "a good time coming," when no land will be planted with this luxuriant grain that is not good, or *made good*, by the liberal management of its proprietor.

As my communication is already too long, I will say nothing at present of the various modes of harvesting the crop; perhaps, at some future time, I may do so, and if I should my remarks will show the results of some practical experiments which I have instituted.

F. Holbrook.

Brattleboro, Vt., Dec. 14, 1847.

The Farmer's Song.

My sturdy sons, bring forth the share,
All sharp to turn th' unfetter'd soil;
If we in autumn fain would bear
The golden sheaves, fear not the toil!

Those demagogues who strive for place,
And others chain'd to "glory's car,"
Fancy in *labor* there's disgrace,
And *honor* in inhuman war.

Not so, we reck our country's weal,
True honor lies in arts of peace,
We'll guard it with our hearts of steel,—
And *dig* to find the "golden fleece."

Nor while we till the teeming earth,
Let us forget that we are bound,
By all the blessings of our birth,
To strive that knowledge may abound.

What though the Spring to labor calls,
And Summer sees the forehead glow;
Autumn with plenty fills our halls—
In Winter pleasures overflow.

Then let us bless our happy state,
And yield to earth the seed and grain;
With grateful hearts we'll watch and wait,
"The early and the latter rain."

Albany, *March*, 1848. M. W. H.

Sea-Coast Farms enriched.—The committee of Barnstable Co. Ag. Society, state that John Doane has by skilful management, rendered his farm *five times* as productive of grain and grass, as it was when he purchased it 27 years ago. The soil was then exhausted, and most of it was thrown out to commons. It is generally sandy, and he has renovated it by plowing in sea-weed, and by making sea-weed compost in his barn-yard. Manure is the "beginning, middle, end," of all good farming.

Niagara Suspension Bridge.—This is to be completed according to contract, in May, 1849. It is to be 1,100 feet long, and 230 feet above the water. Cost, $190,000. The wire cables are locked into the solid rock on each side, 100 feet below the surface, and will be strong enough to sustain 6,500 tons. If the bridge were densely crowded from one end to the other with heavy loaded teams, they would only weigh 300 tons, horses and all.

NOTES OF A TRAVELLER IN GREAT BRITAIN—No. 9.

THERE are in Wales many customs handed down from the remotest period. The girls, to this day, in many instances, perhaps one half, wear large beaver hats, like the men, instead of bonnets; though it is apparent the modern bonnet is making inroads everywhere on the steeple crowned beaver.

MILKING EWES.—I observed for the first time in Anglesea, the milking of ewes. They are kept in a flock, by themselves, and tethered with leather thongs, are driven into the yard at night, and the milk maid sits behind them, and soon performs her work. The quantity of milk I should think over a pint, usually—from this they ordinarily make cheese. I did not have an opportunity of testing its quality. Fuel is scarce, and turf fires are very common.

Oat cakes are among the principal articles used. A large griddle, from eighteen inches to two feet in diameter, is suspended in their deep, old fashioned fire places, and straw kindled under them, and the cakes, the whole size of the griddle, are very soon cooked, and they are laid upon poles suspended in the kitchen, where they roll up as they dry, and are used as they may be wanted. They are soaked in milk usually, and make a very palatable and highly nourishing diet. They keep a long time, and are used by the Welsh, when they cross the ocean, instead of sea biscuit.

The Welsh villages are built with low cottages of one story, the roof not more than seven feet from the ground, covered mostly with straw—the walls whitewashed. *The streets are very narrow; and generally each village has some peculiar trade which is the leading branch of business.* In one village, *LLanerchymdd*, (pronounced Clanerchymede,) I noticed an entire block of double houses occupied wholly by shoemakers, there being, I presume, from 80 to 100 shops.

FAIRS.—I was present at several Welsh fairs. One at the village above-named, was for cattle, horses, and domestic animals. The stock was mostly black cattle, cows and lean cattle. They did not give evidence of all the superiority which I had anticipated from Anglesea cattle, still there were some very good animals. The horses were mostly farm horses, though there were a few good roadsters. Poultry, eggs, stockings, and domestic articles, were in abundance. The women had the entire charge of the cattle, leading them around, and making sales, using a language truly unintelligible to an American. The gathering of the people was large—girls, with their high crowned hats, in great numbers. Each swain took his damsel into the public houses, and here the scenes were far different from any often witnessed in this country. Desirous of seeing all that was going on, I went into these houses, where I found the girls being treated by their companions to gin, beer, porter, &c.; and I caused no little astonishment to many of the fair dames when, on being called on to partake with them, I declined. I found a great desire among these girls to come to America, and I had many offers from them to come over and work at my own price, to pay for their passage. Well might they desire it, as they seldom receive more than twenty dollars a year, and have to perform labor in the field in addition to their household duties, which cannot be of the easiest character.

The tenant farmers, who regulate the prices at these fairs, were present in considerable numbers; and they enjoyed themselves together with a very liberal supply of drinking materials, of a far better quality than that used in the tap-room. What a field is Wales forsome Hawkins or Gough to lecture in! I was invited to talk in one of the parishes on temperance; but the number of those who could understand English well is comparatively few. At all these fairs, bankers attend to furnish money to the dealers, as the sales are almost invariably made for cash. Here was a small room, with a sign over the door, "Branch of the Bank of England."

EDUCATION.—Education is attended to among the Welsh, and very few are found who cannot read or write. I was amused with an English schoolmaster, whom I met at one of their villages, who was teacher for some private families. Learning I was from America, he was very free to converse upon his success in educating the Welsh. He spoke much of the deficiency of books for small scholars, and expressed much satisfaction that he had been so fortunate as to procure one of the most popular spelling-books from America, which exceeded everything he had ever heard of. "It was just the thing," he said, "and would make a great revolution in education." I supposed, of course, that either Noah Webster's, or Cobb's, or Lawrence's, or some of our widely circulated books, was the one he had so fortunately procured, and I asked him to show it me, when he presented me with the "Sunday School Spelling Book!"—a very good book indeed, but far less extensive than those named. Yet this was a great advance on the elementary works used. I found, on examining their works for small children, a very great deficiency in many parts of the kingdom. Their schools are frequently in towns, kept in dark, damp cellars, where the wonder is that they live long enough to learn anything. The teachers were frequently quite old men, and in many cases I found that if nature had been bountiful to them, education had not added very much in preparing them for their work.

I attended a fair at Holyhead, which is the extreme point of Anglesea, and the nearest port to Ireland, from which mail steamers ply daily to Dublin, about sixty miles. There was nothing especially different from the fair before alluded to. This is about eighty miles from Liverpool. A royal harbor is being built here which will enclose about 300 acres, and a railroad is in progress from Chester to Holyhead, which will open direct railway communication with London. The town is situated on a rocky prominence, and the railway passes through a tunnel under the whole town to the harbor. George the IV, on his return from a visit to Ireland during his reign, landed at Holyhead, and gave the name of the Royal Harbor to it, and some splendid memorials have been erected here to his Majesty. An extensive pier has been erected, which extends several hundred feet from the shore, from which the steamers start. A splendid arch is erected at the upper end of this pier, commemorative of the landing of his Majesty, which is a fine specimen of workmanship and design, with appropriate inscriptions. A short distance from the town, on a commanding eminence, overlooking the harbor and channel, is a very handsome pillar or monument erected, commemorating the same event.

AGRICULTURAL SOCIETIES, PREMIUMS, &C.—Anglesea has an Agricultural Society which is doing much to improve the husbandry of the Island. Some of the premiums seem rather strange to Americans, but similar ones are given at many if not all the county associations. I give a few:

"To the male *servant* in husbandry, who has *served* the longest in one place, the time being not less than 10 years—3 sovereigns.

"To the female servant who has served not less than 10 years—2 sovereigns."

On first reading the above one would be led to suppose, that premiums might as well be given to the servile laborers on our southern plantations, who have faithfully *served their masters.*

There are some premiums given that result in much good—

"To the overseers of the high roads in each of the hundreds of the county of Anglesea, who shall have repaired the roads within their parish in the most judicious manner—2 sovereigns."

"To the cottager, being an agricultural laborer, by whom the greatest number of legitimate children, exceeding 14 years of age, shall have been brought up in habits of industry, without parochial assistance—3 sovereigns."

Some of the premiums awarded were—"To Robert Davies, a laborer in husbandry at Rhosbeirio and at Lodge Manachdy, having faithfully served 43 years—3 sovereigns. To Ellen Williams, having faithfully served at Pentraeth, for 20 years—2 sovereigns." H.

"RUNNING OUT OF VARIETIES—CHANGE OF SEED."

MESSRS. EDITORS—Under the above caption, in the last December number of the Cultivator, you express the belief, that plants and vegetables do not degenerate, and that to propagate and continue them in perfection, a change of seed is not necessary. On the contrary, I had supposed that the science of botany and vegetable physiology had established the fact beyond controversy, that "any plant continually reproduced from the same seed on the same soil, will continually degenerate till it becomes extinct." And this important truth, in its application particularly to the potato, has been supported, if I mistake not, by the decided opinion of naturalists who have at all investigated the subject, and by the concurrent testimony of history for the last 150 years. If you will permit a little discussion of the subject, I trust, in case we do not come to the same conclusion, we shall amicably agree to differ; and as it is one that has an important practical bearing, an exhibition of some of the facts within our reach may do some good. It is to be deeply regretted, that in our agricultural literature, we have no full history of the potato. There are many facts regarding it recorded in the treatises of Humboldt and Sir Joseph Banks; in the Edinburgh Encyclopædia, and in many English works of the last century; but such a history as the importance of the subject demands, tracing its propagation, changes, diseases, failures, and reproduction in different countries, is yet a desideratum; and he would be a public benefactor who should prepare it.

I would premise, that an occasional instance of success or failure proves nothing; it may be only an exception to the general rule. So if Mr. Cooper's case, upon which you comment, varies from the general law of nature, it affords but one fact against thousands on the other side. But Mr. Cooper fully admits that potatoes do degenerate, and attributes it to the use of poor seed, and describes one way in which farmers may obtain good seed. That farmers, as he asserts, generally plant their poorest potatoes, I do not believe to be true; in an intercourse among them of more than forty years, accompanied with much observation, I have found such cases to be the rare exception to their general practice. And yet a number of varieties have run out within the last fifty years, and several others, recently in high repute, are fast failing, and have nearly ceased to produce balls. The present disease in the potato was generally first noticed in this country in 1843. Soon after that the agricultural census of this State was taken, which showed that the average product of the potato was only 90 bushels per acre—not half what it was 25 years ago; and that there had been a falling off of the potato crop in the State of upwards of six millions of bushels since 1840. See Cultivator, 1846, page 179. A similar decrease was shown in Massachusetts and in Maine, where the average crop had formerly been 200 bushels per acre. How is this to be accounted for, but by supposing a general degeneracy of the varieties now in use? A corresponding decrease in the crop is exhibited in the history of the plant in other countries and at other times. In a report made to the Royal Society of Agriculture in France in 1819, by M. Le Comte de Neufchateau, Minister of the Interior, respecting the labors of Oberlin in the Ban de la Roche, a district of highlands in the east of France, it is stated that "the potato had been introduced after the terrible scarcity of 1709." But in 1757, "the original plant of the potato had degenerated to such a point as to yield scarcely any increase." To remedy this defect, recourse was had not only to the seed balls, but M. Oberlin "imported from different countries a store of potatoes which replaced those degenerated; and these new productions continue in great demand at Strasburg market on account of their excellent quality."

The potato appears to have been introduced from America into England first by Sir John Hawkins in 1545. Others were carried there in 1573 by Sir Francis Drake; and others again by Sir Walter Raleigh in 1586, who, in 1610, sent some to be planted on his estates in Ireland. They were first cultivated as a field crop in Lancashire in 1684, before which time they were confined to gardens, and only used occasionally by the most wealthy. To Lancashire the field culture was confined many years before it was extended much to other counties; but in the early part of the last century, the cultivation of it became general in Ireland and Scotland. In Lancashire the discovery seems to have been first made, that the potato, by continued cultivation, became deteriorated both in quantity and quality, and the practice was adopted there, and simultaneously in Ireland, of renewing the root or tuber by planting the seed balls. This continued to be the practice among farmers through the whole of the last century, and during that time hundreds of varieties, that were good for a time, and are named in English treatises on the potato, entirely run out. "Farmers," says a standard writer in 1797, "hold it to be necessary to renew the potatoes from the seed once in 14 or 15 years; because, after that period, potatoes degenerate, and produce less and less, till they almost come to nothing." Judge Buel, in an essay, remarks:—"The duration of a variety in perfection, is generally computed at from fourteen to twenty years, though this period is sometimes prolonged by a change of soil or climate." The tendency to degenerate was not a mere opinion, but a fixed fact, attested by the general observation and experience of farmers. It was the same in various parts of Germany, and particularly in Nova Scotia, where the finest potatoes were formerly grown. In that Province little reliance is placed on the introduction of tubers from abroad; their experience tells them, that a reproduction from the seed balls is the most sure and profitable. And in no part of the world, probably, has this reproduction been resorted to oftener than there.

Mr. T. A. Knight, the former distinguished President of the London Horticultural Society, experimented with the potato many years, and in fact made it a particular subject of investigation during his life. In a treatise in the British Farmer's Magazine, he says:—"The first point to which I wish to direct the attention of the cultivator of the potato is, *the age of the variety;* for it has long been known, that *every variety cultivated, gradually becomes debilitated; and loses a large portion of its powers of producing; and I believe that almost every variety now cultivated in this and the adjoining counties, has long since passed the period of its age, at which it ought to have resigned its place to a succession.*"

Similar to the above is the language used in the Library of Useful Knowledge, Farmer's Series—"It has been ascertained by repeated trials, that every variety of the potato, when propagated during a series of years, either by cuttings from the root, or by the whole tubers, is subject to degenerate; in some, the quality remaining good after the produce in quantity has become defective, whilst with others it disappears with the vigor of the plant."

In the year 1778, a disease called the *curl*, affecting both the vine and tuber, appeared among several varieties of potatoes in England, and soon spread through Scotland and Ireland, and subsequently developed itself more or less in this country. It occasioned a general panic, as much perhaps, as the disease that has made such havoc for a few years past; and the multitude of books and pamphlets that were written on the subject, was beyond all precedent. Scientific men engaged in a great variety of experiments, and Parliament ordered investigations, &c.; but nothing absolutely conclusive was ascertained as to the nature or cause of the disease, or the proper remedy. The more general belief seemed to be, that the disease was more or less induced by the age or deterioration of varieties, as those more recently produced from the seed were almost wholly exempt. As the result of experiments, it was ascertained that varieties differed greatly in their nutritive properties—from 30 to 50 per cent.; that they also differed greatly in their vital energy and hardiness of constitution, some of equal age running out much sooner than others; and that the continuance of a variety and its exemption from, or power to resist disease, depended as much upon the above circumstances as upon its age.

Willis Gaylord, I think, (see Cultivator vol. 7, page 165,) expresses the belief, that "the formidable disease known as the curl, is the natural result of the old age of the variety, and indicates the failure of its vegetative powers." "The new varieties of this valuable root, those lately originated from seeds, have not, to our knowledge, been affected by the curl in the least. The inference, then, seems to be a fair one, that in the production of the potato, as in many other plants, a recurrence to the fundamental law of propagation, that from seeds, must be occasionally resorted to. in order to prevent deterioration. The new varieties of the potato, that have been introduced into culture in England and in the United States, from the seeds, exhibit a vigor and strength which none of the long cultivated kinds show." This last mentioned fact is confirmed by the statements of many English and American writers, and abundantly verified by experiments frequently made. In my reading, I have met with many passages similar to the following, which I extract from the Pennsylvania Farmer, published in 1804. Speaking of a field of potatoes raised from the seed, Eli Bronson, of Conn., says:—"Part of the field was better by one-half than the other part. In the best part, the seed was the second year from the balls; in the other part the seed potatoes were from the balls several years before, and had been planted yearly."

One of the most valuable communications respecting the potato, is found in Mr. Ellsworth's report from the Patent Office in 1844. M. Standinger, who had resided at Gros Flotbeck, near Hamburg, in Germany, near 50 years, paid great attention to the potato, and cultivated from the balls for *thirty-six years in succession*. His long experience and constant intercourse with practical men, and his habits of observation, give peculiar weight to his testimony. In view of the weakness in the vital energy of the plant, occasioned, he says, by constantly planting the tubers, he urges the importance of often raising new varieties from the seed; adding, that those grown from the seed balls have a more vigorous growth than those obtained from bulbs, that have been used for seed for some years. His practice, which he minutely details, enabled him to raise as large a crop, both as to weight and measure, the first year from the seed, as could be obtained by planting the bulbs. The opinion of the farmers, that it requires three or four years to bring to maturity and to a large size, potatoes raised from the seed, he considers not well founded, and attributes it to their unskilful method of cultivating them. And in relation to the disease among potatoes, that has spread over Europe the last few years, he expresses his belief that it is owing to degeneracy in the plant, and that the only effectual remedy is to start new varieties from the seed. In proof of this, he states "*that in the neighborhood of Hamburg, as well as also in Holstein, there is not the slightest trace of this disease to be seen, and no complaint of it has ever been heard; the reason of this being, that in the vicinity of Hamburg, there is always an opportunity of obtaining good seed potatoes,*" *&c.*

I did not intend, Messrs. Editors, to make any remarks about the cause or remedy of the present wide-spread disease in the potato; *that* I consider a distinct question from the one I had in view, and will leave it to be elucidated by other pens. That the older varieties of the potato are fast failing, and can be replaced only by renewing them from the seed; that the potato is susceptible of progressive improvement, so that there is reason to believe, varieties may hereafter be produced far superior in every desirable quality to any yet known; that a large crop, of good size for the table, may be raised from the seed the first year, so as to render it profitable to the grower; and that such seedlings, as a general rule, do remain fair and sound, while nearly all the old varieties are more or less diseased and running out, I consider facts well established. These facts have had a living illustration under my own eye during the last few years, while I have witnessed the operations and success of a neighbor, who has obtained the premium for the best and greatest variety of seedling potatoes at the last two Fairs of the State Agricultural Society. While I witness such facts, developed by persevering, well directed labor, I predict with confidence, that the potato will, or may, be perpetuated as long as seed-time and harvest shall endure. H. A. PARSONS.

Buffalo, Jan. 4, 1848.

PLOWING FOR WHEAT.—Elias Cost, of Ontario co., N. Y., is very successful in raising wheat, by preparing his fallows with a *single plowing*—sometime during summer—all the rest of the mellowing and weed-killing being done with a two-horse cultivator. The wheat is covered after sowing, by passing the cultivator but once over it. A strip 6 ft. wide is then covered at a time. The soil is not heavy.

CULTIVATION OF ONIONS.

THE cultivation of onions is in many sections an important business. In some parts of Connecticut, Massachusetts, and other places, they are raised in large quantities, and disposed of both for home consumption and for exportation. As we have had many inquiries in regard to the culture of this vegetable, we think we cannot give the information desired in a better manner than it is embodied in the following essay, which was written by JOHN W. PROCTOR, Esq., and received a premium from the Essex (Mass.) Ag. Society. At our request Mr. P. has furnished a drawing of the "Onion Hoe," which has enabled us to give a cut and description of the implement in connexion with the essay:—

The culture of onions has increased so much, within a few years, in this vicinity, that it has become one of the staple products of the county. In the town of Danvers, more money is realized from the sale of the onion, than in any other product of the soil. Products of so much value, and commanding so much attention, are fit subjects of inquiry; and if there be any facts relating to their cultivation not generally known, it may be useful to have them brought forward.

In making these inquiries, our attention has been directed almost entirely to practical cultivators, without reference to scientific treatises. Our intention being to tell their story, as near as possible, in their own way.

We shall treat of the subject in the following order:

1. The preparation of the land.
2. The manure best adapted to promote the growth.
3. The raising and planting of the seed.
4. The care necessary to be applied while growing.
5. The blights and injuries to which the crop may be liable.
6. The time and manner of harvesting.

1. As to the preparation of the land.

Differing from most other crops, the onion grows well on the same land for an indefinite number of years. Instances of continued appropriation of the same pieces of land to the growing of onions, for *ten*, *fifteen*, *twenty*, and even *thirty years*, have come to our knowledge. It is the opinion of many that crop is better, after the land has been thus used a few years, than at first. Whether this arises from any influence of the crop upon the soil, or is the effect of continued dressing of manures, we have no means of determining. This is certain, that the qualities of the soil necessary for the production of good crops are not exhausted by continued cultivation.

Rarely, if ever, have we known the onion sowed upon the turf when first turned over. It is usual to subdue and pulverize the soil, by the cultivation of corn, or some other crop. Not unfrequently the first year with corn, the second with carrots, and afterwards with onions. It is important, before the seed is sown, that the surface be mellow, finely pulverized, and clear of stones or other impediments, to the free and unobstructed use of the machine for this purpose. The finer and more uniformly mellow the surface is made, the better. Shallow plowing, say from four to six inches deep, is usually practiced. Once plowing only in the spring, and frequent harrowings, are practiced. Before the plowing, the dressing is usually spread upon the surface of the field, so as to be covered or intermixed in the furrow. The mingling and subdivision of it, is effected by the use of the harrow.

Whether it would not be advantageous occasionally, to stir the land to the full depth of the soil, is a point on which there is a difference of opinion; most of the cultivators inclining to the use of shallow plowing only. There are some facts tending to show, that occasional deep stirring of the soil does no harm to the onion crop, but on the contrary is decidedly beneficial. As for instance, onions do better where carrots have grown the year preceding, than after any other crop. The carrot necessarily starts the soil to the depth of ten or twelve inches. Possibly there may some other influence upon the soil from the plant itself. Our belief is, that the thorough and deep stirring of it, is the principal preparatory benefit.

2. The manure best adapted to promote the growth.

Any strong manure, well rotted and finely subdivided will answer. But the general impression seems to be, that manure from stables, where the horses are freely fed with grain, is the best; and that it should be at least one year old, because it will not be sufficiently rotten in a less time. All agree that the dressing for the land should be kept near the surface, well mixed, and as fine as possible. Though we have seen the present year a very superior growth of onions, where green manure from the barn-yard was applied in the spring; but particular pains were taken to subdivide and intermingle it with the soil; and to bush-harrow the land so thoroughly, that very little manure was exposed upon the surface,

Muscle-bed is frequently used upon onion land. A portion of this is deemed by some almost indispensable. We have known the continued use for half a dozen years in succession, even without other manures, with a continuation of fair crops; but the general impression is, that it will not do to repeat the application of muscle-bed many years in succession. The effect being to harden the land, and make too much of a crust about the surface. Without question the effect of the muscle-bed is congenial to the growth of the onion, giving those who live in the vicinity of rivers where it is found, a special advantage over those who are remote from it.

Leached ashes are also a valuable manure in the cultivation of the onion; more so when *leached* than before. All kinds of ashes are advantageously applied on onion land.

Compost manure made of meadow mud and droppings from the cattle, we have known advantageously applied on onion fields; but we have many doubts as to this being the best application of this kind of manure. A more lively and quickly operating manure is better for the onion; one that will give them an early start, and advance them as fast as possible, in the first part of the season. The utmost vigilance and activity is used by our cultivators in getting their land ready, at an early period of the season, for the reception of the seed. It is the first field labor of the spring. The use of compost manure will depend much upon the constituents of the soil with which it is mixed. If the soil be a sandy loam, with a porous subsoil, the compost will do tolerably well; but if it be a black soil, with a clayey subsoil, such as are most of the lands where onions are raised in this vicinity, stable manure, or muscle-bed, or leached ashes, or a mixture of these, will be a better application. The quantity ordinarily applied annually is from four to five cords to the acre. Whatever is applied should be generously applied. It will be vain to expect full crops of onions, without full manuring. When the manure is collected, it is benefitted much by a free application of *elbow grease* in its preparation. The cultivator of the onion must work early and late, and in good earnest. Nothing short of forcible and persevering labor will answer. No man who is afraid of *soiling his hands or the knees of his trowsers* will do to engage in this business. Close work at the proper time, is the only sure guarantee of a good crop.

3. The raising and planting of the seed.

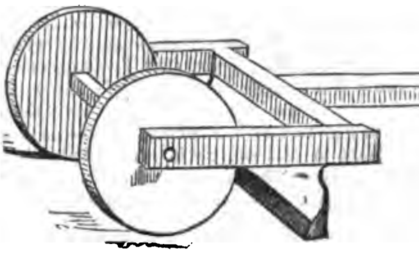
In relation to the onion, as well as all other vegetables, much care is necessary in the selection of the plants for seed, and the cultivation of the seed. By the application of this care, the character of the article raised may be modified almost at pleasure. Until within a few years the *flat onion*, hollow about the stem, has been preferred. The thinner the handsomer. But it is now understood, that the *round, thick, plump onion*, is preferable in many respects. It is thought to yield better, and weigh heavier. It is found to have a decided preference in the market, commanding *ten per cent*. more in price. By selecting those of most desirable form, which ripen the earliest, and carefully setting them for seed, where they will not be exposed to the impregnation of the baser sorts, the quality has been materially changed and improved. These peculiarities in the onion were first noticed in this vicinity by Mr. Daniel Buxton. He was careful to select in the field before the crop was gathered, such onions as he preferred, and to preserve them for seed.

By so doing, the seed which he raised soon acquired a character superior to any other. Many of those who had been accustomed to raise their own seed in the ordinary way, laid it aside, and purchased seed raised by Mr. Buxton, and found their account in so doing. There are three varieties of the onion raised in this vicinity—the *Silver-skin*, the *Red*, and the *White onion*. The *Silver-skin* is the predominant species, and more cultivated than all others. The *Red* is preferred by some—sells better in some foreign markets, but does not yield so abundantly. The *White onion* yields as well as either of the others, is milder and preferable for immediate use; it will not keep as well, and is not fit for exportation; which is the principal use made of our onions.

The common drill machine is used for the distribution of the seed. This admits of regulation, so as to scatter it more or less thick; and in this there is room for the application of sound judgment. The usual quantity sown is about three pounds to an acre. As a general rule, we should say, one pound of good seed was the proper quantity for a quarter of an acre of land of good quality well prepared. It is desirable to have the seed planted as thick as they will grow fairly, both to secure a full crop, and prevent the onion growing too large. Onions from one to two inches in diameter being preferred to those of a larger size. The skilful cultivator carefully looks after all these incidents relating to his crop.

4. The care necessary to be applied while growing.

Much of the success of the crop depends on this care. At first the plant is extremely tender, and requires to be handled with much caution. Any derangement of the fibres or roots of the young plant, is attended with prejudicial consequences. Much attention is necessary to prevent weeds gaining the ascendancy; and in eradicating the weeds. Want of due care in this is often the cause of failure of a crop. We have known the present season, a highly promising crop to be injured *twenty per cent*. at least, by permitting the weeds to remain unnoticed *one week too long*. This is especially true when there has been a want of due care in preventing the scattering of the seeds of the weeds on the land in the years preceding. Care should be taken, both that no weeds shall ripen their seed upon the land, and that no weed seed shall be found in the manure. In this respect, warm stable manure, muscle-bed, and ashes, have a decided superiority over all other manures. Perhaps there is no plant more liable to be injured by weeds than the onion. The fibres it sends out are very numerous, minute and tender; any fracture of any of these necessarily impairs the perfection of the plant. When the land is in the proper condition, two careful weedings are all that may be necessary. The rest of the stirring of the ground that may be required to promote the growth, can be done with the *Onion Hoe*, (fig. 22,) an instrument specially constructed for the purpose, moving on wheels, and adapted to the width of the rows. It is calculated to pass between the rows of onions—being either drawn or pushed. The wheels cover a space of about one foot in width, and the length of the cutting blade is also about a foot. The length of the handle is about five and a half feet. The usual distance between the rows is fourteen inches, and as the hoe takes a breadth of twelve inches, it cuts over all the ground, excepting a strip of two inches along each row. The cost of the hoe varies from $1.25 to $1.50. It was invented by Mr. Joseph Bushby, of Danvers, an intelligent and successful cultivator of garden vegetables, about 25 years since; and was used by himself and neighbors only for about ten years. It has now come into general use, and saves much of *back-aching labor*. The distance between the rows can be varied according to the quality and condition of the soil. Keeping the ground well stirred, loose, and free of weeds, greatly facilitates the bottoming of the onion. There is no plant that will better reward diligent care in the cultivation. The entire difference between a bountiful crop and no crop at all, often depends on this. The old maxim, "a stitch in time saves nine," applies with great force in raising onions.



Onion Hoe—Fig. 22.

5. The blights and injuries to which the crop may be subject.

So far as we have observed, this crop is as certain as any other that is cultivated. We know that onions will not grow without a reasonable proportion of heat and moisture; but we have rarely, if ever known, an entire failure of the crop, where due diligence has been used. There are occasionally blights, the causes of which we have not learned. The more prominent will be noticed.

Sometimes we have seen the plant covered with a small insect or *louse*, that gives the top a white or light colored aspect, and stops and stints the growth. These make their appearance about the time the bottoming commences. We have heard their appearance charged to the use of muscle-bed; but whether they are limited to land on which muscle-bed has been used, we cannot say. We think not. We think they are natural associates of the plant. The effect of them is to diminish the *quantity*, but not materially injure the *quality* of the vegetable.

The crop is sometimes injured by a *blue mould* that gathers on the tops, occasioned by fogs, or an excess of moisture from frequent and long continued rains.

There is a *worm* or *maggot*, occasionally found upon the onion plant, in the early stages of its growth, causing it to turn *yellow* and die. This insect will be found in the bulb, originating from eggs laid upon the leaves, by a small ash colored fly, the scientific name of which is said to be *Anthomyia ceparum*, (See Transactions of the N. Y. State Ag. Society for 1843, page 135.) It comes to maturity in less than a month; so that there may be several generations in the course of the season. Their appearance in this vicinity is rare. Pulverized charcoal and fire have been found the most effectual remedies, against the ravages of this class of depredators.

The most annoying enemy of the onion is the *cut worm* or *grub worm*. It probably is the same described by Dr. Harris, in his report on the Insects of Mass. injurious to vegetation, p. 324, there called "*Agrotis devastator*." And in the 1st vol. of Silliman's Journal of Science, "*Phalanæ noctua devastator*;" though Dr. Harris does not mention the *onion* as among the plants upon which it feeds; probably considering it like *tobacco*, as *too noisome* to be used by any decently civilized being. They are said "to seek their food in the night, or in cloudy weather, and retire before sunrise into the ground, or beneath stones, or any substance which can shelter them from the rays of the sun; here they remain coiled up during the day, except while devouring their food, which they drag into their places of concealment." The remedy for these worms, suggested by our cultivators, corresponds nearly with that proposed by Mr. Foote, of Berkshire, "*to catch them and pull their teeth out*." This being effectually done to all, their operations will be of a limited character. When this is omitted, we have sometimes known whole fields almost entirely cut down by these rapacious devourers. They sweep clean where they go, not suffering even the weeds or any other herbage to flourish. They are more frequently found on *old* ground than on *new*; and particularly where the ground has been covered during the winter with *chickweed or other vegetable substance*, on which the eggs from which they originate may have been deposited. Hence a benefit of clearing the ground of all vegetable matter or other obstructions in the autumn, after the crop is gathered. This clearing also facilitates the early planting in the spring. Autumnal plowing, as it exposes the soil more fully to the action of the frost, and disarranges all abodes for the winter made by insects, may have a tendency to diminish their number.

6. The time and manner of harvesting.

When the tops begin to wither and fall, then it is usual to start the onions from their bed, and throw them together in rows—say eight or ten growing rows into one. After they have lain thus about one week, they are stirred and turned with a rake, and in about one week more, when the ground is dry, and the weather fair, they are gathered up by cart loads, and taken to the barn. Here they are sorted and cleared of refuse leaves, and then they are in a condition to be *bunched* or *barreled*.

It should be remarked, that a large part of the labor of *weeding*, *gathering* and *sorting* the onion, can be performed by children from *ten* to *sixteen* years of age. Boys of this age, when properly instructed, will do about as much as men. They are more nimble, and can come at the work with greater facility. The sorting of the onion is frequently done by girls as well as boys. From *three* to *five* dollars a week, at one cent a basket, are usually earned by them during the period of harvesting—which includes the months of September and October. After the crop is taken off, if the surface is sloping, it is useful to plow furrows about one rod apart, to keep the surface from washing. Unless this is done, all the herbage being gone, much of the soil will be likely to be misplaced, by the melting of snows and running of water in the spring.

The inquiry arises, whether the growth of the onion is limited to soils of particular character, or whether it can be cultivated upon any good soil, with proper attention. We know that there is a popular impression, that there are but few places in which the onion can be cultivated advantageously. So far as our own observation has extended, this impression is in a great measure erroneous. Like every other plant, the onion grows best on very good soils, in very good condition. But we have known very fair crops, on plain, light land, after the same was well saturated with *manure*, *muscle-bed* or *ashes*. A good substratum must be laid before a good crop can be expected; and this being done, a crop may be expected on almost any soil, that will support other vegetables.

If we were asked, what course is best to be pursued with land, on which onions have never been raised, to bring it into a condition for a successful cultivation of the crop, we should say—begin by plowing to the full depth of the nutritive soil, and during the first and second years, thoroughly subdue and mellow the soil by the cultivation of crops of corn and carrots, with liberal dressings of manure; then thoroughly incorporate with the soil a dressing of strong manure and muscle-bed, just covering this dressing; then harrow the surface thoroughly, and clear it of all roots, weeds, or othe obstructions; then apply a coating of lively, well rotted manure to the surface, and bush harrow it; and then it will be in a condition to receive the seed, which is to be inserted as soon as the opening of the spring will admit of its being done.

We are aware that we make the raising of the onion dependant upon severe labor and vigilant attention. We know that it cannot be successfully done without these. But it is not labor lost. No cultivation, within our observation, better repays for the labor and incidental expenses. We have known, the present season, acres that have yielded their owners a net income of more than *two hundred dollars*; and we know that a man with two boys can well attend to half a dozen acres of such cultivation. Surely, when as at present, there is no limit to the demand for the article, and a ready cash market, those who have *acres* and are willing to labor, need not be in want of a fair compensation for their labor.

As samples of the present years produce in the town of Danvers, we state the following that have come under our notice:

Names.	Acres.	Produce.	
John Peaslee,	3	1,960	bushels.
Daniel Osborn & Son,	1 1-5	870	"
James P. King,	1 1-3	660	"
Aaron C. Proctor,	1 1-4	600	"
E. & D. Buxton,	6 1-2	2.750	"
Henry Bushby,	4	2,000	"
Joseph Bushby,	3	1,500	"

Yielding an average of more than 500 bushels to the acre.

POTATO ROT.—Though not always successful, the practice of *very early* planting appears to gain favor. The Morris Jerseyman says that a farmer planted his potatoes earlier than usual this season, which were dug and put into his cellar before the rains came on; and that they still remain perfectly sound. In Mississippi, the best result has been obtained by starting potatoes in hotbeds, and transplanting *slips* from them when three or four inches long—the original continuing to send forth fresh slips for a long time. We have raised potatoes ten days to two weeks earlier by placing the seed in winter in a warm place, so as to sprout them two inches by the very earliest day that the ground could be plowed to receive them.

MAPLE SUGAR IN VERMONT.—The quantity of maple sugar made in Vermont in 1840, was 4,647,000 lbs.

REMARKS ON BREEDING HORSES—No. III.

Editors of the Cultivator—In my first article I noticed four kinds of horses, viz: carriage horses—saddle horses—trotting horses and draught horses. I concluded my last article with a few observations on trotting horses. Before proceeding to remark on draught horses, I would introduce another, perhaps a distinct stock of horses—one at least that does not come under either of the heads above named—I refer to such as are generally used to promiscuous service, and prized chiefly for their performance on the road—called in this country I believe, "horses of all work," in England, "hackneys."

Youatt represents the hackney as a horse that should not exceed fifteen hands and an inch in height—thinks he would be sufficiently strong, and more pleasant for general use, below that standard. The bones below the knee, he says, should be deep and flat, and the tendon not tied in—the pastern should be short, and although oblique or slanting, yet far less so than that of the race horse. Their feet should be of a size corresponding with the bulk of the animal, neither too hollow or too flat—the fore legs should be perfectly straight; the back should be straight and short—the forehand high—the barrel round and the chest deep.

I think we have no horses in our country that answer this description better than the Morgans. About the origin of these, there is much disagreement. Their most ardent admirers seem much concerned to prove that they sprung from a lucky cross of an English thoroughbred and a Yankee mare. But the more prevalent opinion is, that they have from the first, been strongly impregnated with French or Norman blood. And I am free to say that after careful examination of several specimens of the breed, and after reading all, or nearly all that has been claimed by their owners and admirers, I have adopted the more prevalent opinion. It is possible indeed, that the strain of Norman blood was originally derived, through their dam, from the descendants of Norfolk or Suffolk horses, imported at an early day by the New England Colonists; though it is much easier to believe that it came from Canadian mares. But from whatever source it may have been derived, that they have it and had it, I fully believe.

It is perhaps proper to say that my opinion as to the origin of these horses has been strongly biassed by the present appearance of their descendants; and it is possible the mixture of French blood has been wholly acquired by the later generations, and is the result of negligence in breeding. However, I consider this of minor importance; I do not think the less of the horses because I believe they originated in the cross with the Normans—nor do I think their friends need disclaim it so strenuously; especially as it is generally conceded, that they are a distinct and a valuable stock of horses.

It cannot be denied that they possess great energy and courage—great strength and endurance—great ambition and great docility; that they mature early and are easily kept; that they are pleasant drivers and always ready for business, and what is more important, they sell readily at high prices—still I cannot bestow upon them the unqualified praise they have so often received. They are not the style of horses I most admire, or that I would take the most pride in breeding. Driven in spans to light wagons, they certainly are dapper little animals, and in that capacity all that could be desired—but in other departments of service, I think they have many superiors. If for instance I wanted an elegant carriage or single horse for light and rapid driving as well as for family use, and occasional labor on my farm, I would greatly prefer one of the early descendants of Duroc or Messenger, of Mambrino or Bellfounder, not that they are more hardy or stronger or even fleeter, perhaps, but because they had a nobler appearance, greater symmetry of form, a more graceful, as well as a more majestic carriage, more of those commanding features, usually ascribed to the noblest specimens of their race. This of course is a mere matter of individual taste, to be approved or rejected as the reader may incline.

I am well aware that the Morgan horse has been much admired for his style of action. Indeed I think this is one of the points, in which it is claimed by his friends that he excels all others, and perhaps my exception to this opinion will be received with great surprise. But I really think I have never seen a Morgan horse that I considered either a graceful or a stately mover; I have seen many that were full of show and action, pompous little creatures, almost bursting with zeal and animation, but with such broad breasts and bantam figures, as to give their gait too much the appearance of a strut or waddle, reminding me somewhat of the little coxcomb, who, as he parades the street, swings his arms and stretches back his head, and impudently looks every person in the face, as if to say—"You must not presume to think me small!"

In answer to this it may be said, that the great endurance of the Morgan horse, upon the road; the facility with which he performs long journeys, &c., is sufficient evidence that his motion is graceful and easy, for it is seldom indeed that a horse with labored action, is capable of making long and rapid journeys; very true; but I think the endurance of the Morgan horse (sometimes overrated I suspect) is attributable more to his great vital energy and muscular development, than to his easy paces.

Again, symmetry of form is claimed as a prominent excellency of the Morgan horses, but I must except to this opinion also. I think their legs are too short for their length of neck and bulk of body. They are generally too wide forward and too close behind, so that many of them *paddle* with their fore feet, and at the same time unless carefully shod, interfere with their hind ones. Some of them also incline too much to hollow back. But I need not say more, unless it be to repeat the remark that the most of these objections are too exclusively matters of taste to bear much disputation. It may be proper also to add, that in my opinion of the Morgan horse, I do not think I am sustained by the public at large, and that there are many men, better judges of horses than I, who would much prefer a genuine, well selected Morgan horse to any other that could be procured.

As to the breeding of Morgan horses, I would strenuously advise an immediate return to thorough-bred families, from which it is claimed they originated. They have been bred too long on common stock. I am confident that much of their original superiority may be reclaimed by a judicious crossing with higher bred animals, and to effect their improvement I would much prefer to breed from Morgan mares to thorough bred stallions, than from Morgan stallions to thorough bred mares; because as far as my observation extends, whenever it is sought to mix a strain of Norman blood in that of the Arabian or English race horse, it should be through the dam rather than the sire. I believe there are very few instances where valuable stock has been produced by Morgan horses and highly bred mares, but there have been many successful crosses of Norman or Canadian mares to thorough-bred stallions.

In breeding from Morgan stallions, I believe it is generally admitted, that mares with a cross of Canadian blood should be avoided, at least this is the experience of Mr. Thurston, the former owner of the Black Hawk Morgan, he having observed that colts got by Black Hawk on mares tinctured with Canadian blood, are generally inferior to those got on other mares. A clear indication that the stock has gone far enough in that direction.

It may be objected to my articles, that I having been striving to turn everything back to thorough-bred* families,—whereas it has been advised by better authority, that "the best course for improving our horses" is to direct our efforts more exclusively to the various families of grade and native stock that have been long approved in our country, and breed each kind within itself, until its peculiar characteristics are fully and permanently developed, with a view I suppose of gratifying our national vanity, by establishing breeds of our own, such as we can claim to be distinctively American, or forsooth *Republican*. But I am quite sure that such a course would not be recommended for breeding sheep or cattle—it would not be politic, inasmuch as there are many very wealthy, influential and philanthropic men in our country, engaged in breeding English stock. Neither would it be popular inasmuch as it has been well settled than in all attempts to improve sheep or cattle, *none but thorough-bred males* should be employed. Besides it is well known that it cost Bakewell the labor of a lifetime and a large fortune to establish a single breed of sheep—and the Messrs. Colling much the same, simply to improve a breed of cattle. But if such a course is not advisable in breeding cattle, of which we have native breeds, thought by many to be superior in some respects, to the English—why should it be adopted in breeding horses of which we have no native families worth perpetuating. Most of the horses, we have ever had that were of any value, were derived from foreign sources, and most of those that remain are but degenerate descendants of imported thorough-breds. To breed these within themselves therefore, with a view "to insure uniformity of character," would be only to breed them farther down in their course of degeneration, and instead of insuring "uniformity of character," would be only insuring uniformity of defects and making them, in the end, utterly worthless. It is impossible to breed them *up*, or towards their former standard, without going back to the place where they began to degenerate—or in other words, without returning to the thorough-bred families from which they sprung.

I have also through the entire course of these articles, advocated the breeding of horses separately, with reference to different departments of service. I have done so, because I think every breeder should have a definite object in view. If he breeds for a combination of characteristics, he will in all probability become confused, and get only an unworthy mongrel.

If we aim to breed elegant carriage and saddle and trotting horses, we will, no doubt, produce a sufficient number of hackneys or "horses of all work," in spite of ourselves. But if we aim only at producing hackneys or "horses of all work," there is danger that the result of our labors will be but a multiplication of indifferent or worthless animals, already too numerous in our country.

I had intended to make some remarks on draught horses, but this article has become so long, that I am sure your readers will gladly excuse me.

Syracuse, Feb. 1848. JOHN BARBER BURNET.

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* By thoroughbreds we generally mean, the English race horse, the Barb, the Arabian, and their lineal descendants.

Diseases of Animals, &c.

Scours in Swine.

It is frequently remarked that it is useless to attempt to cure sick hogs, and to the prevalence of this opinion is to be attributed in a great degree no doubt, that want of effort which results in the loss of so many of these valuable domestic animals. In June last, I observed that one of my hogs manifested an indisposition to eat. I paid not much attention to him for a few days, when again noticing him, I saw that he had failed in flesh considerably. He was then put in a pen by himself, and I soon found that he had the scours very badly. His appetite decreased to such a degree, that a gill of corn was more than he would eat in a day, while the complaint continued to increase. I tried different remedies without effect, when, as a last resort, I had recourse to the Cultivator for information. Among various cures for this complaint in *calves*, (I saw none for swine) I noticed that *calomel* had been given with good effect. I procured about 30 grains, which quantity was given in two doses in the course of a day. He soon manifested favorable symptoms, and showed a disposition for food. He was fed with sweet milk, boiled and thickened with flour, until cured. I would say in conclusion, that I think the information I got from the Cultivator, in this one case, saved me more than its cost for a dozen years at least; and as a testimony of the regard I have for your paper, I send you the price of eighteen copies for the present year—most of which are for new subscribers. A. D. *Princeton, N. J., Jan.* 12, 1848.

"Tail Sickness."

The tails of cattle sometimes increase in length to an inordinate degree. There is a popular belief that this elongation of the tail injuriously affects the animal's health. Yodatt, Dick, and some other veterinarians, ridicule the idea of any disease being brought on by this cause. They admit, however, that letting blood by cutting off the tail, may in some cases afford relief to animals suffering from diseases brought on in various ways; but they hold that the same benefit would follow from taking the same quantity of blood from any other part. We presume that the amputation of an inch of the tail, has but little effect in any way, excepting that suggested by the writers referred to. Formerly it was the belief that the *palsy* in cattle was caused by "tail sickness," and superstitious people in some instances resorted to a *charm* to effect a cure. A piece of turf on which the animal had trodden was hung on a stake, accompanied by incantations, and a "black cat" was made to pass three times around the cow's body, "over the back and under the belly." If the cat struggled and scratched smartly, she generally got away by the time she had been round three times, and the necromancers were convinced that the bewitching devil had passed into her.

REMEDY FOR WINTER-KILL.—A correspondent of the Ohio Cultivator, gives the following preventive of *winter-killing* in cattle, hogs, and sheep, many often dying during winter and early spring:—

R.—Good shelter-um, q. s. (*quantum sufficit.*)
Corn-meal-um, q. s.
Clear water-um, q. s.

The "*corn-meal-um*" to be made into a poultice, and kept constantly applied to the mucous membrane of the stomach. [For the benefit of strictly professional men, the above may be given as follows:—

R.—Refug. opt. q. s.
Zea pulv. q. s.
Aq. font. q. s.]

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Transactions of the Ohio Nurserymen and Fruit Growers' Convention, *held at Columbus, September 29th and 30th*, 1847. 8 vo. pamphlet, 46 pages.

The state of Ohio, in many respects a fine fruit country, has been rather remarkable for the confusion of the names of its apples. Besides its native fruits, many new names have been applied to old varieties introduced from different sources, at an early period. More lately these were nearly all supposed to be new varieties of high merit. Recent investigations have restored in many cases the original and true name; in this way the Putnam Russet has been found to be the old Roxbury Russet; the Little Pearmain, Bullock's Pippin; the White Pippin, Canadian Reinette; Red Romanite, the Carthouse or Gilpin; Oxeye, the Vandervere, &c.

In order to reduce this chaos to order, as well as bring out the finest native varieties, a Fruit Convention was held in central Ohio, and the results of its deliberations are given in the valuable pamphlet before us. For copies, we are indebted to M. B. Bateham and F. R. Elliott, secretaries, by the latter of whom it was chiefly prepared for the press, and whose extensive acquaintance with eastern and western fruits, has eminently qualified him to throw light upon the subject.

The present work contains outline figures of the Early Harvest, Tart Bough, (a sub-variety of the Early Harvest, but three weeks later,) Early Strawberry, Early Pennock, Roxbury Russet, Cooper Apple, Willow Twig, Wells Apple, Raules' Jennett, Western Spy, *Phillips' Sweeting*, and Ohio Nonpareil; the seven last are believed to be western varieties. A very large number of others are noticed, and some of them described. There are also figures and descriptions of seven new and fine varieties of cherry, originated by Dr. Kirtland of Cleaveland—making 19 figures in all. There are also notices of several known varieties of pears and some other fruits, which were exhibited to the Convention.

This cannot fail to be a very interesting work to every amateur in the country; and to every nurseryman and fruit raiser in Ohio, it must be invaluable. It is sold at the office of the Ohio Cultivator, Columbus, for 25 cts. per copy, or $1 for five copies.

A large field remains open for future labor, and a permanent State Fruit Committee was appointed, and another Convention is to be held next autumn.

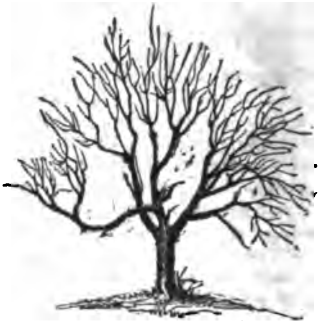
Management of Fruit Trees, &c.—Timely Hints.

Pruning.—Every cultivator of fruit should thoroughly examine his orchard and fruit garden, before he is interrupted by the approaching busy season. Those who have large trees should give them the necessary pruning. A slight trimming every year or two, is much better than the more frequent practice of heavy pruning after years of neglect.

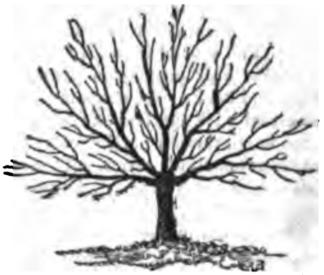
The work should be done as early in the month as possible, that the wounds may become well dried before the sap flows. There is more judgment and care needed in pruning large trees than in any other part of their management. The operator should constantly bear in mind, that a neat, handsome head is to be preserved; that the best shaped and most thrifty branches are to be left; and that the light of the sun should be admitted as far as practicable to all parts of the tree. A thrifty growth of the branches will thus be kept up; and in connexion with good cultivation of the soil, the fruit will possess the large size, and fine flavor and appearance, so eminently desirable, and usually seen on young trees. The advantages of admitting the sunlight must be obvious to every one who has noticed the difference between the rich flavor of fruit fully exposed to the solar rays, and that which has grown under a thick mass of branches and leaves. Indeed, so important is this influence, that the exposed side of an apple is often found much richer in flavor than the shaded side—the rich acid of the Esopus Spitzenburgh, and the sugary sweetness of the Tallman Sweeting, are most strikingly observable under the dark red surface of the one, and brown sunny cheek of the other.

Large wounds made in pruning, should be protected by a suitable air-tight and water-proof coating, otherwise they will dry and crack, admit rain, and finally become diseased from decay. The cheapest good coating is a mixture of tar and brick-dust, applied hot; the best and neatest, is a thick solution of gum shellac in alcohol, kept corked tight, and applied with a brush.

Pruning Peach Trees.—Pruning the peach is very little practiced, simply because its great advantages are generally unknown. Most cultivators, however, must have noticed the great difference in the size of the peaches, and still more in their quality, grown in one case upon young and thrifty trees, and in the other, on old and stunted ones. Old trees might be rendered thrifty, and productive of large delicious fruit, if a regular system of pruning were kept up. The tendency in the growth of this tree, when neglected, is to form long and bare branches, with leaves and fruit only at the extremities, shutting out the light from the rest of the tree, and attended with slow and diminutive growth. Judicious pruning, by shortening-in, commenced while the tree is yet young, and continued yearly, will preserve a round, handsome head to the tree, and young and thrifty shoots will start from all parts of the branches, even down to their very commencement, at the upper extremity of the trunk. Old trees have, in some instances, been much benefitted even by the rough and unskilful trimming by the winds, and new and healthy branches have sprung up and borne finely on old and stunted trees, which had been thus accidentally relieved of a part of their useless limbs. A. J. Downing says:—"We have seen two peach trees of the same age side by side, one unpruned, and the other regularly *shortened-in*, and both bearing about four bushels. The fruit of the latter was, however, of double the size, and incomparably finer." A similar experiment, made



A neglected and unpruned Peach Tree. Fig. 23.



A properly pruned Peach Tree.—Fig. 24.

the past season by the writer, was attended with quite as great success. Fig. 23 represents a neglected and unpruned peach tree, the leaves and fruit being at the ends of the branches. Fig. 24 is a tree properly pruned, so as to admit light to all parts. The pruning should be done early in the month.

Raspberries.—These should be pruned as soon as the surface of the ground becomes thawed in spring. All the old stems, and all the smaller young shoots, should be cleared away to the ground, and about half a dozen of the largest stems of last year's growth left for bearing. Their upper extremities for a foot or two should be cut off, being weak and useless, and detrimental from their weight and shade. The remaining stems, if not of a stiff and upright variety, should be loosely tied to stakes.

Hardy Grapes need pruning early, before the sap flows and *bleeding* commences. A moderate bleeding need not be feared, but if profuse, it is detrimental. The sooner the work is done in the month the better. The Isabella, Bland, Catawba, and other American varieties, are of such rampant growth, that when only a few years old, they bear most abundantly, and hence the inexperienced cultivator concludes that pruning is not necessary, and that they do better without it. A most erroneous conclusion—for the vines by such neglect soon become a mass of thickly matted stems and branches, their vigor is exhausted, and diminutive crops of poor fruit is the result. But by good pruning they may be kept in perennial vigor and undiminished productiveness.

The great leading rule to follow, is to keep the old wood down as near the ground as possible, and to let new and vigorous shoots, spring up, from the bearing branches, which must be thinly and evenly distributed over the trellis. If these requisites are strictly attended to, heavy crops of fine fruit will many times repay the attention given, whatever be the particular mode adopted; although the method of training horizontal arms, to sustain upright and parallel bearing shoots, is the most systematic and convenient, as represented in the annexed figure. Two different ways of management for this method have been practiced. The first is to allow the old horizontal arms to remain, but to cut down to one good bud, every year, every alternate upright branch, that a new one may spring up in its place, thus renewing these uprights every year. The second is to let the uprights remain several years, only pruning-in yearly their laterals, to a single bud each. An acquaintance, who is wonderfully successful with the Isabella grape, successively buries in the earth the old portion of the vine, so that young and vigorous stems are at all times only visible; and by careful and clean pruning, he raises enormous crops—some of the bunches of Isabella grapes being eight inches long, and in one instance a single branch of one year's growth, bore the following season eighty pounds of fruit.

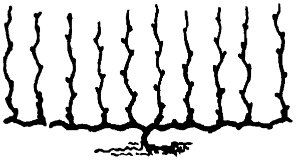


Fig. 25.

Grafting.—Grafts should be cut early in the month. No pains should be spared to procure them from the best sources—the difference between a good and bad scion for a single tree, may make a vast difference in the value of the crop in future years. Grafting is a simple operation; and every careful farmer, or his son, may do the work for himself, and more satisfactorily than to employ others. The grafting wax may be prepared in different ways. The cheapest composition is made of one part, by weight, of beeswax, two of tallow, and four of rosin. More beeswax and less rosin adds to its cost, but renders it less adhesive to the hands. Three parts of rosin, three of beeswax, and two of tallow, constitute an excellent grafting wax. It is applied by spreading it, while just melted, with a brush over a thin newspaper, which is cut up with a knife when quite cold, in plasters of convenient size; or it is spread on cheap calico or muslin; or it is worked with wet hands till it may be drawn out in strings or ribbons, when it is alone wound round the grafted part; or it is applied alone, while just melted, to the part, by a small brush. Either mode of using is good, provided that the wax when used is warm enough to bear pressure, and cause adhesion closely on every part, and leave no vacant cavities. In cold weather a lantern or chafing-dish will be needed for this purpose.

The operator may suit himself as to the peculiar mode of grafting. But it is very essential to have sharp tools; to have the parts in close contact by pressure; that the outer edges of the wood (and not the outside of the bark) in the stock and graft, may exactly coincide at one point at least; and that all cut parts be excluded from wet and air by wax well applied. Cherry and plum trees should be grafted very early; apples and pears, later.

To prevent confusion in names, only one variety should, if possible, be set in each tree, and the name and number in the row be immediately registered in a book for future reference. No one should think of trusting to memory for the name of a single sort.

Budded Trees.—Trees in which buds were inserted last summer, should now be headed down to the bud, that it may grow freely by receiving all the sap. To cause the new shoot to grow straight, leave two or three inches of the stock above the bud; to this the new shoot is to be closely tied as soon as it is a few inches long, and so remain till mid-summer, when the stump is to be pared down closely to the bud.

Fruit Trees which lack vigor of growth, should be stimulated with a good coating of old manure, spaded in as soon as the frost leaves the ground. All fruit trees, except of the largest size, which do not stand in ground kept constantly cultivated by the hoe, should have a circle, *several feet* in diameter, spaded around them. Soap-suds, especially for peach trees, is fine. All trees are benefitted by it.

Orchard Caterpillars.—Take them early, and their destruction is easy; let them flourish for awhile, and it is exceedingly difficult. Their eggs are now found in nests or rings of several hundred each, near the extremities of the young shoots, and at a few feet distance appear like small knobs on the branches. They are now quickly clipped off and burned; every one thus removed preventing a large nest of voracious caterpillars. As soon as the buds begin to open, they hatch, and remaining for a few days in their small nests, give them a conspicuous downy appearance; when the remainder, if any should chance to have been left, should be speedily removed and destroyed, as they will soon increase rapidly in size and mischief.

Caterpillars' Eggs. Fig. 26.

Preparing for Transplanting—Those intending to transplant fruit trees, should have the ground well prepared in season, by digging ample holes, and preparing the soil in the best manner. Let the holes be six or seven feet across, and all the outer portions, or those not to be in immediate contact with the roots, filled beforehand, if convenient, with a mixture of old rotted manure with soil. This will give the young trees a vigorous start until they come into bearing; and in the meantime the ground should be gradually enriched around them by manuring the crops. It would be still better, if the ground for the young orchard could be for two years previously well prepared for trees, as follows:—First, run the subsoil plow as deeply as possible, to loosen the soil for the entrance of the common plow for trench-plowing, the latter operation for the purpose of working manure deeply below the surface, and for intermixing thoroughly the surface soil, subsoil and manure. Two years of such cultivation, with carrots and other roots, will bring land to the finest order, and even one year would be eminently useful.

Cultivation of the Apple.

Having been practically acquainted with the Apple tree for more than thirty years, and being anxious to see this tree more successfully cultivated, I am constrained to give publicity to my observations, experience, and mode of culture, hoping that some may be instructed, and the attention of others awakened to this interesting subject.

The apple tree is the most valuable fruit tree that grows in this part of the world—is naturally very long lived, very productive, and easily cultivated, requiring but little more attention every year than a hill of corn; and yet, strange as it is, there are not half enough good apples produced for family use.

Trees may be procured of the nurserymen, or be raised on your own premises. If the latter course is taken, procure as many seeds as you want from the kind of apples you wish to produce. They will not all of them produce the same kinds—a few will be the same or similar, and others new varieties—nearly all will be very good, if the seeds were of good kinds. Plant your seeds as soon in the spring as the frost is out, in good mellow ground, about a quarter of an inch deep, in rows about two feet apart, and about six inches apart in the rows. Keep the ground mellow and clean, and in about three years they will do to set in their abiding place, or to graft.

Trees of natural growth generally last the longest. In the selections of the kinds you prefer to graft, do not disregard those that are uniformly good bearers, and prefer grafts from young healthy trees. Cut the last year's growth with an inch or so of the year before, if you wish to keep them awhile. If you cut at all from an old tree, take a last year's sprout, well matured. The nearer the time of running of the sap the better, but if most convenient, they may be cut and kept in a moist place some weeks. As soon as the sap runs, remove the soil from around the tree about an inch deep, insert your graft smoothly, and bring the soil around it about an inch above the insertion. In about two years your trees will do to set in their abiding place.

In selecting a place for an orchard, prefer upland or hill-sides. The fruit will be richer, higher flavored, and more abundant, than on low, flat lands. Almost all kinds of soil will do, if they are deep, rich, and well cultivated. In this vicinity, the soil called *iron-stone* is lately the most productive. It is believed by some that an eastern exposure is liable to blast; but I have not found it so.

Dig the holes for your trees a little larger than the extension of the roots, and about eight or ten inches deep. Take up your trees carefully, without breaking the roots, and the sooner they are set in their places the better. Set them just about as deep as they were in the nursery, filling the holes with just what was taken out and nothing else. Many trees are greatly injured by being set too deep. Set a stake about a foot from the tree, leaning to it, of equal height, and tie the tree loosely to the stake. Plow or dig the soil mellow, around the tree, two or three feet from it at least, in the spring of every year, to the depth of three or four inches, but not to injure the roots.

In cultivating your orchard, a good arrangement, is to plow one or two years, and leave the ground one or two years in clover—keeping the soil rich with manure. This mode is much better than to put heaps around the tree, and bury the roots too deep. Just before the sap runs, every spring, prune, but in doing this, be careful not to prune too much. I have seen a great many orchards nearly ruined by pruning too much. The supposition that more sap and nutriment is obtained by the remaining branches when some are removed, is a mistake. The branches constitute a part of the tree, and do their office in furnishing nourishment just as much as the roots. The lower limbs of the top should be about four and a half feet from the ground; and here let a full and natural top be commenced. I have never known a very large tree, nor a good bearing tree, among those that had high tops, either by cutting off the lower branches, or by trimming them up high.

A great many apples are lost by leaving them too long on the trees. Winter apples, as soon as the seeds are ripe, should be picked, and taken to a cool, dry, shady place, spread thin, and lay without cover, until there is danger of freezing. When there is danger of this, remove them to their winter quarters, which should also be cool, just so as to avoid freezing. Put them on shelves, not more than two or three courses thick, and if put in a cellar, the shelves should be at least three feet high from the bottom. Leave them uncovered, and remove the decayed ones, as occasion requires, and in all that you do, be careful not to bruise them in the least. I have kept Newtown Pippins in this way until August. R. K. Tuttle. *Morristown, N. J., February 4th*, 1848.

Productiveness of Strawberries.

In all the long discussions about barren and fertile strawberries, the actual amount which each variety will yield per acre, which is of great importance, appears to be entirely forgotten. To one who raises for market, it is quite essential to select such a variety as will yield a surplus of a hundred per cent. above the cost of raising, rather than one that will yield no such surplus at all; and the home cultivator wishes to get as much from his labor and land as practicable. Only a few statements of the amount per acre have ever been made. Hovey's Seedling, it is said, has yielded 2,000 quarts, or more that 62 bushels per acre. The Old Hudson, (of Cincinnati,) which is probably the most productive of all strawberries as yet much cultivated, has produced, according to Nicholas Longworth, at the rate of 5,000 quarts, or 156 bushels per acre. Burr's Late Prolific, a new variety lately originated at Columbus, Ohio, it is stated yielded 35 quarts on a bed 6 feet by 20, which is about 240 bushels per acre; it doubtless received the best possible culture. It would be very interesting and of great value, to know the comparative productiveness of such varieties as Hovey's Seedling, Large Early Scarlet, Ross' Phœnix, Swainstones' Seedling, Black Prince, and others, raised side by side, and treated precisely alike. Such experiments would greatly facilitate the selection of the best sorts, for each different part of the country.

Moss on Fruit Trees, may be removed by soap-suds, thin whitewash, or a mixture of cow-dung, urine and soap-suds.

Grafting the Tree-Pæonia.

Loudon, in his Surburban Horticulturist, describes a mode of grafting the fine varieties of the Tree Pæonia on the roots of the common herbaceous varieties. According to his method, the work is done at midsummer, and the grafted roots inserted in a bed of tan, to be taken up and potted after they have thrown out roots by mid-autumn, and placed in a cold frame to remain through winter.

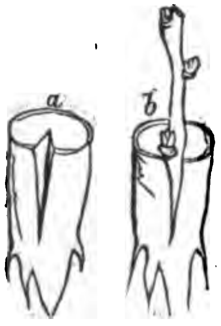


Fig. 26.

The writer has been successful by performing the work early in the spring, before the buds of the graft have started. In the annexed figure, *a* exhibits a portion of the root of the common double crimson pæonia, not split, as in common cleft grafting, but with a long acute notch cut out of the tuber with a sharp knife. The graft is cut so as to fit this notch exactly as represented at *b*. It is then secured by bass and covered with wax, and placed in fine rich mellow earth, even with the upper bud of the graft. The Tree Pæonia, as is well known, is of very slow increase, and is usually sold at a dollar or two a plant. The roots or tubers of several of the herbaceous varieties may be had in abundance. In the experiments already performed, most of them have grown and done well; but the work must be done as early in the season as practicable, and before the buds have swollen, which usually takes place very early in the Tree Pæonia.

Fire Blight—the Columbia Pear.

The remarks on these two subjects, under the Horticultural head last month, not having been seen by the editor of this department till after publication, he wishes to remark, in addition to what is there stated relative to the pear blight—that he is fully confirmed from past observation, that the *immediate* cause of this disaster is in some seasons chiefly the *hot rays of the sun*. It is however not at all improbable, that there may be a predisposing cause independent of this, but this latter must remain for the present somewhat involved in conjecture. Some notice of the observations leading to the belief in the destructive influence of solar heat, were published in the first number of the current volume.

It may be proper, in connexion with this subject, to point out a single error in the remarks of a highly intelligent correspondent of the Horticulturist, where he attributes *scalding of the sap* to the concentration of the sun's rays, "by the shower drops of water suspended in the tree, *forming so many lenses.*" Now, the diameter of a water drop is scarcely the tenth of an inch; its focal point is only about one half its diameter from the drop, or the twentieth of an inch. It is hardly admissible to suppose that these drops hanging in the tree, should be situated just the twentieth of an inch from the trunk. If the distance were only the twentieth of an inch more, the rays instead of being brought to a focus, would be widely dissipated. Again, in a lens of so short a focal length, the diameter of the focal point would be less than one thousandth part of an inch—so exceedingly small as not to possess any effective power in heating even the epidermis.

The *Columbia Pear* has borne for several years in Western New-York, and the quality of the fruit has corresponded precisely with that of specimens received from Massachusetts. It is a vigorous, productive and very handsome pear—there is scarcely a variety that will compare with it in handsome, rounded, symmetrical form. This, with its large size, must have given it chiefly its high fame, for we have never been able to place it higher for quality than second rate. It is to be presumed that the high commendations bestowed upon it in the "Fruits and Fruit Trees," must refer to specimens ripened farther south or in the neighborhood of New-York city.

Abstract of Remarks on Various Pears,

DESCRIBED IN THE FIRST VOL. OF THE HORTICULTURIST.

The following abstract of remarks, in the first vol. of the Horticulturist, on various pears, was made out originally for my own information and convenience. Thinking it might be quite as useful to many others as to myself, I concluded to send it to you for publication. It embraces the substance of all that has been said on most pears of note, by the experienced gardening and pomological contributors of that valuable journal, during one year.

Opinions relative to the same variety of fruit, vary essentially in different sections of the country, and even in the same neighborhood. By placing these different opinions, as far as they have been elicited, side by side, the inquirer by comparing them, can more easily arrive at its true merits. With the name of each writer, wherever it first appears, I have given his place of residence. The pears are arranged in alphabetical order. The figures in brackets refer to the page of the Horticulturist. At the conclusion of the remarks on each pear, I have added its time of ripening, from Downing's "Fruits and Fruit Trees."

Andrews—This pear Cheever Newhall of Dorchester, Mass. (415) considers a fruit of the very first merit. J. J. Thomas of Macedon, N. Y. (480) says it is a fine pear—a great and early bearer—fruit handsome; but only second rate in richness, and drops from the tree usually before it is sufficiently matured to ripen well in the house. Early in Sept.

Bartlett—Mr. Downing says of this pear (13)—"The Bartlett pear from its unusual productiveness, size, excellence and beauty, as an early fruit, added to its vigor as a tree, and the rapidity with which it comes in to bearing, has actually been the object of a sort of mania among those largely engaged in pear planting, within the last three years." Col. Wilder, Mr. Johnson and Mr. Ives, (278) all near Boston, coincide in declaring this to be "all in all," "*the best* summer pear." Downing in speaking of it again (279) says: "The Bartlett is almost a universal favorite. This is owing not simply to its size and good quality, but also to its regular productiveness, joined to its invaluable habit of adapting itself to every soil, and bearing while the tree is yet very young." Last of August, and September.

Belle de Brussels—This is a fine, early, French pear, but recently introduced into this country. P. Barry, of Rochester, N. Y., (446) thinks it unsurpassed by any summer pear of native or foreign origin that he has yet seen. "The tree," he says, "is vigorous, its growth is compact and straight; it is prolific to a fault." Fruit large. Middle of August.

Beurre Bosc—Downing says of this (13)—"Among autumn pears, the Beurre Bosc proves, year after year, equally deserving of praise. Its branches are regularly laden with large fair and beautiful specimens, which ripen gradually, and always attain a delicious flavor. With many sorts of pears, it is unfortunately the case that only one fruit in ten is a really fine specimen. With the Beurré Bosc, it is just the reverse; scarcely one in ten is blemished in appearance, or defective in flavor. It is, in short, a standard fruit of the highest excellence, worthy of universal cultivation." Robt. Manning of Salem, Mass. (279) considers it, taking every thing into consideration, the best fall pear. October.

Beurre d'Aremberg—Downing remarks (13) that —"This is now unanimously acknowledged by our best cultivators, to be the *first of winter pears* for this climate. The tree, hardy, uniformly productive, and holding its fruit well; the fruit itself high flavored, maturing perfectly in all situations, and always keeping and ripening admirably." Col. Wilder (19) says—"as a constant, prolific, hardy sort, the d'Aremberg is unsurpassed, and whether on pear or quince stock proves admirably adapted to this climate. It is a fruit easily excited to maturity, and may be brought into eating even in November, or retarded until March." Col. Wilder, Mr. Walker, and Mr. Johnson, near Boston, and Mr. Downing, (278) concur in naming this as the most valuable winter Pear. December to January.

Beurre Diel—Cheever Newhall (415) recommends the Beurré Diel for strong rich soils. September to December.

Beurre Easter—M. P. Wilder writes (22)—'this variety has generally proved so variable and uncertain that it cannot, from our experience at present, be relied upon. It, however, succeeds better on the quince." Cheever Newhall (416) considers it a pear of first quality when well ripened, and will keep with care until May, but is, with me a shy bearer, and often does not come to maturity." J. J. Thomas raises a similar objection (480)—"the fruit rarely attaining perfection under ordinary management." January to April.

Bloodgood—J. C. Lee, of Salem, Mass. considers this the best early pear. (279) Cheever Newhall (415) says of it—"This pear may be good in some soils, but I have never succeeded in raising one that could be classed first quality." Downing says (415)—"this is uniformly the very best early pear here." (Newbury.) J. J. Thomas writes (480)—"The Bloodgood proves to be a decidedly first-rate pear; no one preceding or ripening with it, proving its equal in all respects." Beginning of August.

Catilac—Cheever Newhall (415) considers this, the best winter *cooking* pear. "It is very large, stews very tender, and is then of rich color and superior flavor." November to March.

Columbia—M. P. Wilder says—(20) "This excellent native variety has proved with me a fruit more uniformly smooth, perfect shape, and free from the depredations of insects, than almost any other sort. The tree is thrifty and hardy, not prolific when young, but a great bearer on mature subjects, the fruit being regularly distributed over the branches, and of a very uniform size." J. J. Thomas (480) says—"The Columbia bears very fine crops of large fair fruit, but drops too early from the tree." November to January.

Cushing—The only remarks in relation to this pear, are by Cheever Newhall (416) who says—"The Cushing, a native, is a good fruit, but ripens with the Bartlett and is inferior to it."

Dearborn's Seedling—Downing says of this variety (13)—"It is not a large pear, but it is one of most excellent flavor, and bears such regular and abundant crops, that its moderate size is amply compensated for by its abundant quantity. It is always best when ripened in the house, and bears transportation to market well." J. J. Thomas writes, (480) "Dearborn's Seedling is one of the best—nearly equal to the Bloodgood, but smaller." Mid. of August.

Dix—Cheever Newhall (415) remarks—"The Dix pear sometimes, in this neighborhood, cracks in exhausted soils, but is a noble and delicious fruit, not surpassed in my estimation by any other pear known. October and November.

Doyenne Gray—J. J. Thomas is the only writer in first vol. of the Horticulturist who refers to this pear. He says (480)—"were I compelled to choose but one variety, as best, for its delicious flavor, I should perhaps select the Gray Doyenné." Mid. October.

Doyenne White, *or Virgalieu*—Wm. C. W., Baltimore writes, (144)—"The white Doyenne pear which some have said is an outcast, flourishes on my father's estate as with you, in all its original vigor. * * * On the 4th October 1844, dining at Rouen, (France) I found at the depot the handsomest specimens of the White Doyenné I ever saw, looking and tasting as though they had been grown on trees as healthy and vigorous as the Seckel." The same writer says again, (197) that in November in Paris, "the pear preferred above all others was the White Doyenné far excelling some dozen varieties then in season, both in beauty and quality," Downing (279) recommends this as the best *fall* pear for all gardens north and west of Newburgh. Cheever Newhall (416) says—"With me it succeeds well when engrafted on quince stocks, but is worthless on pear stocks." J. J. Thomas remarks (480) that it maintains with him the high character given of it elsewhere. September to December.

[We are obliged to defer the remainder of this Descriptive List of Pears, from our correspondent, F. J. Scott, Esq., Toledo, till our next.—Eds.]

Budding in the Spring.

In the spring of 1845, I cleft grafted an apple stock that was about two inches in diameter. The grafts grew well until the summer of 1846, when they were blown off by the wind, in place of which quite a number of sprouts came out. On the 11th of May, 1847, I inserted four buds in the usual manner, taken from scions cut early for grafting, with the most perfect success. The largest of which is now three and a half feet long, and an inch and a half in circumference at the base. Alfred Young. *Gustavus, O., Jan.* 14, '48.

Blight in Pear Trees.

A valuable tree of Fall Butter pears was much affected in 1846. A part of the bark was removed in the 6th month, care being taken to avoid bruising the ligneous formation. The tree revived, and in 1847 appears more thrifty. A younger tree also showed the affection. The bark was removed entirely from the body. The disease has disappeared, and the tree is thrifty, and is now heavily laden with large grown fruit. I do not say it was affected by "hiding" the trees, but do not know what else to attribute it to; and have seen cases in apple trees where it materially helped them. R. H. *Richmond, Ind.*, 10 *mo*, 1847.

The Paulownia.

This new and famous shade tree, as is well known, is remarkable for the large size of its dark green leaves. A young tree, in moderately rich soil, on the grounds of the writer in Macedon, bore one leaf measuring over 25 inches wide, and about as long, and several others nearly as large. The soil was *well cultivated*. On other land as rich, but little cultivated, within the same enclosure, the leaves were scarcely six inches in diameter.

Correction.—In the description of the Primordian plum, last number, for "marked" read *necked*,—the fruit possesing a slight neck like a pear. Page 53, 1st col., for "Fortunes," read *Fortune*.

Balsams.—A correspondent of the Gardener's Chronicle states that seed three or four years old, saved from double varieties, is pretty sure to give double flowers; whereas one year old seed is almost certain to produce single blossoms.

MEMOIR OF ELKANAH WATSON.

Elkanah Watson, always a private citizen, occupied for many years a prominent position in sociey. A life, protracted far beyond the ordinary term allotted to man, embracing the thrilling period of the Revolution, and intimately associated with many prominent actors in its scenes, in both hemispheres; occupied in the agitation of varied subjects of public improvement and popular interest, and in the discussion and controversies incident to them, must necessarily be fraught with incident and topics which cannot adequately be exhibited in our limited columns. We can scarcely present more than a naked synopsis of some of the prominent events of a peculiarly active and variegated career, with a little detail of the eminent services of Mr. Watson in the promotion of agricultural improvements. Mr. Watson was born in Plymouth, Mass. He traced his lineage to the pilgrims of the Mayflower, being descended from the first marriage, as is supposed, solemnized in New England. The qualities of his puritan ancestors, enterprize, an active and inquiring mind, and an ardent love of liberty, were strongly impressed upon his character. In accordance with the usages of those days, he was withdrawn at an early age from school, and placed with John Brown, of Providence, then among the wealthiest and most eminent merchants of the Colonies. The agitating scenes of the revolution aroused all the sympathies of Mr. Watson, who was repeatedly under arms during the contest. His memoirs contain a glowing and graphic account of probably the first cruise of a colonial vessel, in avowed opposition to the flag of England, in which he was engaged with a design to intercept and rescue Mr. Brown, a prisoner under arrest by the government, in his passage from Providence to Boston. In the service of Mr. Brown, and intrusted with a large amount of funds, he travelled in 1777, on horseback, from Boston to Georgia. Passing almost along the line of the military operations of the war, his journals exhibit a most exciting picture of the spirit and incidents of the times. On his return from the south, Mr. Watson sailed for France in a packet, bearing despatches to Dr. Franklin at Paris. With much difficulty and hazard they evaded the British cruisers, and safely reached La Rochelle. He remained several years in France, residing principally in the city of Nantes and at Paris. In the intervals of his business avocations, he travelled extensively in France, Flanders, and Germany, and always, as his journals evince, with an eye of careful and attentive observation. He ever afterwards cherished the most kind recollections of France, and the warmest sympathy in all her interests. While in Paris he enjoyed a familiar intercourse with Dr. Franklin, and in common with all who approached the illustrious patriot and philosopher, was fascinated and delighted by the wisdom of his tongue, and the benignity of his heart. During his residence in France, Mr. Watson became acquainted with John Adams. A close and uninterrupted intimacy of more than half a century subsisted between them, cemented by a frequent intercourse of a confidential correspondence. The letters of Mr. Adams are of a highly interesting character, and portray the sagacity of his mind, and the lofty devotion and fervor of his patriotism. Mr. Watson proceeded in 1782, to London, as bearer of despatches from Dr. Franklin. In that capacity, and by the influence of letters from Franklin, he was brought into personal association, not only with Burke and others of that galaxy, which then shone in the British Parliament, but also with Priestley, Price, and other distinguished philosophers of England.

Moving in a sphere so elevated and so intellectual, Mr. Watson enjoyed the most favorable opportunity of observing the institutions, the men, and the affairs of the Old World. His habit of viewing society was thus enlarged, and his mind expanded and improved. He traversed various sections of England and Wales, and although yielding to the strong and bitter feelings of hostility fitting an American patriot at that epoch, against the government, he seems to have been amazed and delighted in witnessing the progress of England in the arts of peace. He also made a hasty tour through Holland, which was the basis of a future publication. The canals and internal improvements of these countries, their beauty and vast agricultural resources, appeared particularly to have attracted his attention. He carefully examined their public works, and from the mere curiosity of an observing traveller, procured data of expenses, plans, &c., which, at a subsequent period, he applied to the most important practical purposes. The rural beauties that every where charmed his eye, first probably excited an interest and desire for agricultural pursuits; whilst the high degree of improved culture, and the successful application of science, he saw, strongly contrasted with the primitive system, or want of system, to which he was accustomed in America. His observations on these subjects created an enduring conviction of the importance and necessity of these improvements to his own country, and aroused an enthusiasm for their promotion, that glowed to the latest period of his life.

Seed thus fortuitously sown in Europe had, after the lapse of many years, their fruition in America, in the efficient and untiring zeal with which he devoted himself to the advancement of numerous schemes of local and public improvement, and the great interests of agriculture. Mr. Watson had the peculiar, and to a high toned and ardent American, the grateful privilege, of hearing from the lips of the king of Great Britain, before the Imperial Parliament, the recognition of our national existence. He always alluded to that event as the proudest hour in his life. In 1784, he returned to America, with an increased attachment for the manners, customs, and institutions of his native land. Soon after his return Mr. Watson again proceeded to the Southern States, and resided for some years in North Carolina. On his tour southward he visited Mt. Vernon, and we deeply regret we cannot extract from his journal an incident, that exhibits a beautiful trait in the lovely and harmonious character of Washington. The journals of Mr. Watson during his southern residence, afford an interesting portraiture of the manners and customs at that period of society at the south. In the practice, from early youth, of recording the events of his own life, and the incidents around him, with the opinions and feelings excited by them, he has left MSS. which range over a period of more than half a century, and are a rich source of valuable and curious information.

In 1788, he became a citizen of Albany, and at a very early day began the agitation in that city, of various subjects of local improvement. Among other schemes which engaged his attention for a series of years, and which he sustained through the press and by personal efforts, we may enumerate the paving of the streets—a supply of water—a public library—the introduction of lamps—the organization of the Bank of Albany—a turnpike between Schenectady and Albany. In the same year, Mr. Watson travelled along the valley of of the Mohawk to Fort Stanwix, at that time on the very confines of civilization. The policy of a union of the waters of Lake Ontario and the Mohawk, and the improvement of their navigation, seemed to have suggested itself to his mind, with a deep impression of its importance and facility. His views on this subject were matured and strengthened by subsequent observations made in a tour through the same region three years afterwards. The result of these convictions was earnest and continued appeals to the public and the legislature, urging the adoption of a specific system of internal improvement. "Who initiated the canal policy of the State," it is not our province to discuss; but we may assert, that the efforts and suggestions of Mr. Watson, were peculiarly efficient in originating the canal law of 1792. He was a director, and among the most prominent and active agents of the company formed under that law.

A society was organized in 1792, through his exertions in Albany, offering rewards to promote the manufacture of maple sugar, and an attempt was also made to procure, from the legislature, an act for the same object. The fact, trifling in itself, is interesting, as it presaged the future labors of Mr. Watson for the advancement of agricultural interests. Soon after, he drafted and circulated a petition to the legislature, and was primarily instrumental in providing a law establishing in New-York a state prison, upon the hard labor system.

In 1807, Mr. Watson purchased a beautiful seat, with an extensive farming establishment attached, situated in Pittsfield, Mass. To this place, in one of the most picturesque and delightful regions in New England, he retired, in pursuit of those rural scenes and enjoyments which for twenty years had been his warmest aspiration. The county of Berkshire, always distinguished for the beauty of its scenery, was not then one of the garden spots of New England. Its farms were not fertile, were generally cultivated with little care or science, and the stock were of an inferior quality. This was the scene of Mr. Watson's agricultural labors, and the great field of his usefulness. The Agricultural Society of that county, which was mainly founded by his unwearied efforts, is an enduring monument of his devoted patriotism and fervent zeal. Although practically ignorant of all agricultural pursuits, he enlisted in his new vocation with all the ardor and engagedness that marked his character. The coarse wool sheep and primitive swine first attracted his attention, and his inititory measure in his career of improvement, was the introduction of a pair of fine grade Merino sheep, from the flock of Chancellor Livingston. These were soon succeeded by two grass feed swine from the same vicinity. The merit may be ascribed to him of having, within the first year of his residence in Berkshire, by the introduction of these animals, laid the basis of that branch of agricultural interest, which has proved one great element of the wealth and prosperity of that county. These sheep were the first Merinos that had been seen in the region, and their appearance excited much curiosity and discussion. To gratify the one and arouse the other, Mr. Watson, in pursuance of notice, exhibited them on the public square in Pittsfield, for general inspection. The occasion assembled a considerable number of farmers and others, who were surprised and delighted with the animals, and with the quality and texture of their wool. This novel and humble exhibition he states, created universal interest, and suggested to his mind those cattle shows which were soon established in the county. The wool from these sheep he caused to be manufactured into cloth, by the most skillful artists the country then contained. The work far excelled any previously produced, and probably was the inception of those woolen manufactures that now compete with the choicest fabrics of Europe. The incident was announced by the press throughout the country, with a detail of the expense of manufacture, the quality, &c., of the cloth, and samples of it even, were exhibited in our chief cities. We may here add, that just previous to the war of 1812, Mr. Watson selected sufficient of his finest wool for two coat patterns, and had it manufactured in the most perfect style our improved artisans could give it. One he sent as a tribute of patriotism to Mr. Madison, and the other he transmitted, as an evidence of our triumphant progress in the arts, to the Prince Regent of England. At an early day Mr. Watson introduced the subject of an Agricultural Society, and personally, as well as by constant discussions in the newspapers, pressed its formation. His exertions in the outset, with the mass of the community, met with little favor or consideration. The practical farmers, with few exceptions, derided his schemes, and turned a deaf ear to his solicitations, as the mere dreams of visionary speculation. Unyielding zeal, the sagacity of some, and the intelligence of the mass, ultimately triumphed. Many who were the most violent in their derisions and opposition to his project, lived to feel their error, and to give to the society their most hearty and vigorous support. In 1810, a feeble and sickly manifestation was made in an attempt at an organization. This, however, the next year expanded into an exhibition, affording the highest interest and gratification. Mr. Watson, on the first anniversary of the society, delivered an address before a crowded and interested audience. A feeling was aroused that has never since that day slumbered. The success of the effort was no longer a problem. The progress of the society has continually been onward, expanding in influence and usefulness. Its anniversaries have become festival days of the county. Its form and plan have been made the model throughout the Union, wherever similar institutions have been organized. Its vast and most beneficial effect upon the agricultural condition of that county, none can hesitate to admit.

In 1816, Mr. Watson abandoned his rural pursuits, his flocks and herds, and returned to his former residence in Albany. He soon became involved in the agricultural movements in this State. The following year he aided in the formation of a society after the Berkshire model, in Otsego county, and for several successive years was constantly and vigorously engaged in the organization of similar societies in this and the adjacent States. He struggled during this period with unremitted efforts, to induce the legislature to extend to them, and kindred interests, the fostering hand of government patronage. At an earlier period a National Board of Agriculture, had been with Mr. Watson a cherished project. He was the author of an elaborate report, presented by the Committee on Agriculture of the New-York Assembly, in vindication of this policy, which attracted much attention and was generally diffused. Although without pretension to scientific attainments, the opinions and suggestions of Mr. Watson were continually solicited from various sections of New-York, and the adjoining States, in reference to numerous questions of internal improvements.

Our space will not premit us to present any detail of the system or theory of the Berkshire Society, and can only refer to Mr. Watson's history of that society, published in 1820, for a full exposition of its plan and operations. Other associations for agricultural improvement had no doubt previously existed; but we believe it is conceded, that the model and general features of the Berkshire system were peculiar and original.

The addresses delivered by him before various agricultural societies were of deep interest, and fraught with judicious scientific and practical suggestions. During the last residence of Mr. Watson in Albany, he opened an extensive correspondence with our foreign public functionaries, for the purpose of procuring, by enlisting their services and zeal, new and useful varieties of vegetables and grain. He thus became the medium by which the seeds of many important and valuable agricultural productions were introduced into the country. The staple grains of some sections of this state, still successfully cultivated, may be traced to these efforts.

Mr. W. was an ardent and efficient promoter of popular education. The interests of colleges, academies, and common schools, continually engaged the services of his pen, and his individual exertions. He was an early and active advocate of the cause and privileges of Union College. The Lombardy poplars, that formed the academic grove which enveloped the old college edifice, were transmitted personally by him from Albany, and many of them planted by his own hand.

His mind and eye were ever intent on subjects of public improvement, and prompt and vigilant in their development. Whilst a sojourner at Poughkeepsie for a few months, he devoted himself to arouse the public mind to the consideration of various questions of general and local interest. The project of a turnpike road from New-York to Albany at that time occupied his attention, and was urged with his usual ardor and determination. Passing through Buffalo, on a journey to Detroit in 1818, he saw the extreme necessity of more extended commercial facilities at that place; and on the impulse of the moment devised a plan for a harbor which he submitted to the proper authorities. The plan subsequently adopted was almost identical with that he suggested; whether his was the original conception, we cannot assert.

Although fervent and enthusiastic in his patriotism, a warm admirer of our political institutions, and a firm believer in their perpetuity, Mr. Watson rarely engaged in the mere party politics of the hour. His essays and speculations on political subjects were numerous and diversified, exhibiting no ordinary sagacity and observation. In 1782, whilst at London, he earnestly and with great boldness, in the avowed character of an American citizen, advocated in the public press of that city, the rights of the colonies to their independence, and urged the policy of its recognition upon the government.

He again removed from Albany in 1827, and resided the remainder of his life at Port Kent, a village upon Lake Champlain of his own creation, and the principal avenue to the immense manufacturing region embraced within the valley of the Ausable. Here a new field was presented for his patriotic labors, and although verging upon three score and ten, Mr. Watson entered upon it with renovated vigor. We will only indicate, as an evidence of his active usefulness, the law for a public state road from Port Kent to Hopkinton; a railroad from Lake Champlain to the St. Lawrence, and another from Champlain to Boston. Each of these was either the original conception of his own mind, or was powerfully promoted by his agency. The powers of his mind were unimpaired, and his intellectual industry unabated, to the last days of his life. His thoughts were occupied on these subjects even amid the last throes of nature. Just before his decease, and when unconscious of all external objects, he inquired for one who then stood over his bed, and added, "ah, yes, I know, he is gone to ——, after that railroad bill," and then, in the delirium of approaching death, he exclaimed with the strongest emphasis, and earnest gesticulation, "yonder is the track for the road, and at this point it must terminate." "The ruling passion strong in death," was still animating and lightening his mind.

Few citizens have exhibited through a long career more ardor and devotedness for the promotion of the best interests of their country. The fact that his devotion to public concerns impaired the private fortune of Mr. Watson, attests the purity and disinterestedness of his motives. Some of the projects which he conceived were doubtless visionary and extravagant, while others, which found little favor in popular sentiment, in their inception, proved by their results, the sagacity and prescience of his theories. Impatient at the listless and calculating spirit of doubt or scepticism that often crossed his path, he sometimes opposed it with an impetuous zeal rather than conciliatory moderation, and thus animated hostility when he might have diverted opposition. Mr. Watson's essays and other publications were very voluminous, and spread over a period of more than sixty years. He wrote with great fluency, and in a nervous and elevated style, wanting often, however, the polish and precision formed by the hand of finished education. He was not learned in science or literature; men and nature were the books he studied, and from travel and observation he had accumulated no ordinary fund of facts and intelligence. Mr. Watson died at Port Kent, December 5, 1842, in his 85th year. A plain monument is erected over his grave, inscribed with this simple and touching epitaph, written by himself:

HERE LIES THE REMAINS OF
ELKANAH WATSON,
The Founder and First President of the Berkshire Agricultural
Society. May generations yet unborn learn by his
example to love their country.

THE FARMER'S NOTE BOOK.

Benefits of Reading Agricultural Papers.

Since I last saw you in Albany, I have occupied some of my leisure moments in looking over the volumes of the Cultivator from its commencement. I have been induced to do so from curiosity to determine, from examination, whether the paper has generally had a *practical* character, or has been (as some carping persons say it has) a receptacle for wild, impracticable theories, or for puffs of speculator's humbugs in cattle, sheep, hogs, potatoes, corn, &c., &c. While I find much matter pertaining to husbandry which cannot be of practical value to me, or to other farmers in this immediate vicinity, I have been agreeably disappointed in finding so much knowledge communicated in its pages which I can immediately apply, and with immediate benefit. Much instruction contained in the early volumes of the Cultivator had passed from my memory—been forgotten with the volumes of the paper, when filed away, unbound and undisturbed. I mention this fact as a strong argument to other subscribers in favor of procuring the bound volumes, as I have done. Many farmers of sound judgment, and who are well informed on other subjects, refuse to subscribe for the Cultivator, assigning as a reason that it is the mere organ of a wealthy band of speculators in bulls and boars, and filled with laudatory notices of farming—such as rich, amateur farmers alone can follow. If such opponents of the Cultivator, and of kindred agricultural journals, would sit down, and carefully examine the matter contained in the published volumes, they would (many of them at least) become friends and patrons of the paper.

While leisurely turning over the pages of the Cultivator, and noticing their contents, I have frequently been reminded of remarks made to me, during the exciting political campaign of 1840, by a gentleman—an eminent lawyer, among whose papers I found the numbers of the Cultivator. Upon expressing my astonishment at finding *him* the reader of an agricultural paper, when he was not the proptietor even of a garden, he answered me—"I am not a farmer, and never expect to be. I was bred and have lived a lawyer, and shall continue letting myself out to be kicked in other men's quarrels; but the Cultivator is pleasant reading to me, and I turn from the details of my profession, and the sharp warfare of party, to the pages, of that paper, as school boys turn from their dog-eared Virgils to the pages of glowing romance."

That a large portion of the earlier volumes of the Cultivator was devoted to the mode of farming best suited to the sandy plains about Albany, I know; but I also believe that a large space in its columns has effected much towards making "the desert rejoice, and blossom like the rose." I am fully of the opinion that the amount of knowledge relative to *the Diseases of Domestic Animals and their Cure*, which has been diffused through your paper, aside from all other matter contained in it, is worth more to any farmer than many times the cost of the paper.

And I here take occasion to remind you of the lamentable ignorance generally prevailing among farmers on the subject of the diseases of animals, and the proper method of treatment. With rare exceptions, farmers are ignorant on this subject, and the horse and cattle-doctors they are compelled to employ, are, most of them, vile quacks, knowing nothing of their business, and in their ignorance killing or ruining many a valuable animal. Even our physicians are generally as ignorant of comparative anatomy, as they are of the picture-writing of the Aztecs. In France men are regularly educated as veterinary surgeons, but I am not aware of any opportunity in this country of acquiring such knowledge. Our colleges, yielding to the demands of enlightened public opinion, are establishing professorships of scientific agriculture; but no college or school in the country, so far as I am informed, has given instruction on comparative anatomy, in connection with the cure of diseases affecting domestic animals. You have a flourishing medical college in your city which should take the lead in this matter. The city which furnishes the *first agricultural* paper in the country, should be the first to furnish correct information on this neglected subject. Furnish the graduates of that institution with as thorough knowledge of veterinary surgery, and its kindred branches, as they are taught on other matters pertaining to their profession, and their respectability or usefulness will not be impaired. They will then be able, without demeaning themselves, to benefit as well the property as the persons of their patrons; and in a pecuniary point of view will be gainers. S. A. LAW. *Meredith, N. Y., Jan.* 21, 1848.

Fattening Hogs.

On the 11th day of April, 1846, I bought a sow and eleven pigs, the pigs being about three weeks old, for $12.25, and not having plenty of feed, (for I had recently changed my residence from Dutchess to Livingston,) I gave one pig away, and kept the rest, and fed them the milk of four cows, after it was well skimmed, with the slops from the kitchen, and the bran from 15 bushels of wheat, 8 bushels of oats, and 4 bushels of corn ground together. This was their feed till after harvest, when I turned them into the stubble, and fed them but very little till I shut them up to fat, which was about the first of October. I then put 9 of the shoats in a close pen, and fed them a few boiled potatoes and some raw apples—I should think not to exceed $5 in value—and about 50 bushels of ears of corn, half of which was of an inferior quality—the whole of the corn being worth probably $12. On the 16th of November I butchered four of them—sold these in Rochester—two of them for $3.75 per hundred, and the other two for $3.50 per hundred—the weight of the four 685 lbs.; the amount received for them $24.86. The other five I killed on the first of December, and they weighed 977 lbs., which I laid down for family use; but the pork was worth at the time $4 per hundred. The sow and shoat I kept to winter, and they were worth $8. This ends the first year; and now for the second:

The result of the present year I shall not be able to give with as much accuracy, perhaps, as I did those of the first, as I had grain of my own raising to feed, and did not measure it as I did the first year when I had it to buy. But judging from the improvement of the two lots, I should think the expense of feed about the same. About the first of April my two sows had pigs; the old one had 13, ten of which I raised, and the young one had 7, which I sold with the mother when about three weeks old for $9. After harvest this year, my pigs had a better chance in the orchard than last year, but not so good a run in the stubble. Last year they were not permitted to run in the orchard at all, on account of my having corn on the same lot. About the first of November I shut up the ten shoats and fed them principally on corn until the 30th November, when four of them were butchered, which weighed 878 lbs.; and sold for $5 per hundred—and on the 9th of December the other five were slaughtered, and weighed 1012 lbs.; which were worth $5 per hundred also. On the 22d of December, killed the old one, after having her shut up only about five weeks—she weighing 357 lbs., which was sold for $5 per hundred. This ends the account of both years, except the summing up.

Dr.	Cost of sow and pigs, April 11th, 1846,...............		$12.25
	Expense of summer feed and fattening, 8 bush. oats, at 2s. 6d., 4 do. corn, 4s, 25 do. corn, 3s. 6d., and bran from 15 bush. wheat, $2,........................		18.06
			30.31
Cr.	By sale of 685 lbs. of pork, ...	$24.86	
	Value of 977 lbs., at 4c., per lb.,.............	39.08	
	Value of old sow and shoat to winter,......	8.00	71.94
	Leaves to pay for milk, whey, pasture, care, &c.,		$41.63

SECOND YEAR.

Dr.		Cr.	
Value of sow and pigs same as when purchased,..,....	$12.25	By 878 lbs. of pork, sold for 5c. per lb.,..........	$43 90
Expense of summer feed,	7.50	By 1012 lbs., worth 5c.,.	50.60
Of corn in fattening, 100 bush. at 50c. per bush.,	50.00	By 357 lbs., sold for 5c.,	17 85
	69.75		112.35
			69.75
			$42.60

Avon, Dec. 31*st*, 1847. S. S. Morehouse.

Breeding Horses.

I have read Mr. Burnett's remarks in the Cultivator on the subject of breeding horses. He advocates the use of thorough-bred stallions with our common mares. As far as my observation has gone, the great error of breeders has been that they have consented to use any horse they meet with, provided he has a long pedigree.

Mr. B. seems to think there can be no such thing as a "horse of all work." I think the farmer wants a horse of that kind; he does not want one merely for the carriage or the cart, but for various uses.

As to the saddle-horse, the less the farmer has to do with him the better. Of what use is such a horse but to prance up and down a few minutes in a day for *amusement?*

And the "three-minute" horse—the farmer does not want him, neither does any one but a fop or jockey.

Again, I think a medium-sized horse, weighing from ten to twelve hundred, is best even for *draft*. They are easier to keep, and though they may not be able to draw as much at a load, they are quicker, and generally more tractable. I am in favor of rearing *good* horses, as they cost no more than long legged, slab-sided, worthless animals.

I do not understand Mr. Burnet's objection to having a mare well ribbed up. He says:—"I would not have her too closely ribbed up, for this is objectionable in either mare or horse." I do not understand *wherein* he thinks this an objection, especially as he says it is desirable that the foal should be *close* in this respect. Junius. *Farmington, Ct.*, 1848.

Subsoil Plowing.

Elias Phinney, Esq., Lexington, Mass., is of opinion that a great benefit would be derived from subsoiling on "hard New England soils," as a protection against drouth. The stirring and deepening of the subsoil gives plants an opportunity to extend their roots, so that more moisture is brought within their reach. Mr. P. observes, that on fields which have been long cultivated, a crust is formed at the depth to which the land is usually plowed, which becomes almost as impenetrable as the highway which has been travelled over for a like number of years. He has practiced subsoiling considerably for several years, and states that the increase of crops in consequence of this operation has never been less than 25 per cent. He derived less benefit from subsoiling last year than usual, owing to the more regular supply of rain through the season; yet on a dry loamy soil, with a hard, gravelly subsoil, he obtained a greater yield of potatoes by one-fourth, from subsoiled rows, though planted side by side with others not subsoiled. This was not the only difference—for the potatoes from the subsoiled portion were so much superior in appearance, that they actually sold in market for 25 per cent. more than the others—making an advantage from subsoiling, in both quality and quantity, of 50 per cent.

Dean Robinson, of West Newbury, Mass., also states that he has used the subsoil plow on land which has a very hard subsoil, "composed of clay, gravel, and small stones." His custom has been to follow the sward plow with the subsoil plow, both of which stir the ground to the depth of 20 inches. He considers the cost of this mode double that of common plowing; but he thinks the extra expense is fully compensated in the saving of labor in after cultivation, as the land is much lighter and is easier worked after subsoiling. He also uses the subsoil plow on his garden, and on all land designed for the growth of tap-rooted vegetables. We gather these facts from the Transactions of the Essex (Mass.) Ag. Society.

Good Cows.

From the statement of competitors at the show of the Worcester County (Mass.) Ag. Society, we gather the following:—M. G. Maynard, of Westborough, offered a cow eight years old, one-fourth Durham, which calved the 12th of May. In ten days, from the 10th to the 20th of June, she gave an average of eighteen five-eighths quarts per day. In the same length of time, from the 10th to the 20th September, she gave an average of 13 5-8ths quarts per day. Her feed was pasture, in common with other cows.

Charles Wilcox, of New Braintree, offered two cows. One of them, eight years old, calved 11th May. In ten days, from 1st to 10th June, gave an average of 20 6-10th quarts. In ten days, from 1st to 10th September, she gave an average of 14½ quarts per day. The other cow offered was of the same age, and calved t the same time as the above. In ten days, from the st to the 10th of June, she gave an average of 20 -10th quarts per day; in the same length of time, from e 1st to the 10th of September, an average of 14 -10th quarts per day.

Wm. S. Lincoln, of Worcester, offered one cow. he was seven years old, and calved 27th May. In ten ays, from the 1st to the 10th of June, she gave an verage of 16 7-10th quarts per day, which yielded in he ten days, 16 lbs. and a fraction of butter. From the 6th to the 15th of September, she afforded an average of 10 4-10th quarts per day, which yielded in the ten days, 14 lbs. 10 oz. of butter.

Nahum Warren, of Shrewsbury, offered a cow, four years old, from which 13 lbs. of butter were made in 10 days in June; and 10 lbs. in the same length of time in September.

Jacob W. Watson, of Princeton, offered a cow, from which 18¼ lbs. of butter were made in ten days, from 10th to 20th June; and in ten days, from the 10th to the 20th September, 13¾ lbs.

Charles E. Miles, of Shrewsbury, offered two cows six and seven years old. They had been kept for the purpose of fattening calves for veal. One cow calved on the 15th of February. When taken to the show, in September, she had a calf by her side, and she had then fattened four calves, whose veal weighed 380 lbs., and sold for $30.40. The other cow calved on the 25th of March. She fattened her own calf and four others, whose weight of veal was 450 lbs., and sold for $36. Mr. Miles had three other cows which were used for fattening calves. From the five, 2,050 lbs. of veal, which sold at an average of 8 cents per pound, and brought $164.

The Committee make some observations in regard to the quality of milch cows which are worthy of attention:

"It is supposed that a cow of *medium* quality will give, for two months after calving, 12 quarts of milk per day; four months following, 7 quarts; two months, 4 quarts; one month, 2 quarts—amounting to 1,860 quarts, or an average for nine months of about seven quarts per day. It will take ten quarts of milk to make one pound of butter; thus producing about 186 lbs., which at 16 cents, amounts to about $30. Suppose every farmer to resolve that he would keep no cow that did not hold out as a good milker for ten months in the year, and that did not give, for two months, 16 quarts per day; four months, 12 quarts; three months, 7; one month, 2—amounting to 3,090 quarts, or an average of ten quarts per day for ten months? Is it not practicable to have, throughout the country, cows as good as the last described?"

Potato Disease or Rot.

We have received from Rev. **Chas. A. Goodrich**, of Hartford, Ct., an article first published in the *Hartford Courant*, in reference to the potato disease. An enumeration of some of the causes assigned for this malady is given from an English paper, the principal of which are:—Attacks of parasitical fungi, insects, ("the idlest of all speculations," says the English authority,) frost, lightning, exhausted vitality, bad cultivation, manures, miasmata, such as produce cholera in men, and other epidemics. Mr. G. thinks none of these causes appear tenable, "unless it be the last." He observes—"it seems apparent, at least to the writer, that the disease did not originate in the soil, nor is it attributable to any defect in the potato itself. The remote cause is some peculiar change in the *atmosphere*, which we may never understand: the proximate cause, consequent upon that change, is the *derangement of the functions of the stalk and leaves.*"

Mr. G. holds that the leaves and stalks are first affected, through this atmospheric influence, and that the vitiated juices are transmitted to the tubers, thus laying the foundation for their disease and decay. Its effects, he believes, are something in proportion to the stage of growth the tubers are in when the tops are attacked. Hence he observes—"If the tuber was but half grown, the stalk would be proportionately green, and the injurious process would be longer continued. If the potato was nearly ripe, still the process might proceed, and acrid food be transmitted sufficient to cause its decay in the course of weeks or months. And does not this," he continues, "account for the fact that potatoes which appear fair and sound for some time after they are housed, ultimately betray symptoms of disease, and in the course of the winter become worthless? They were inoculated with the disease, and in process of time the infection breaks out. Upon this theory different varieties would suffer unequally, being more or less hardy, and the same variety on different soils might also be differently affected.

* * * *

"Should the inquiry be made, why some fields, either in whole or in part, escape the ravages of this disease, while contiguous crops are entirely ruined, the reply is, that it will be in season to answer the question, when the interrogator shall explain why some peach trees escape the yellows, while others wither and die under that scourge—or some pear trees escape the blight, while neighboring ones are ruined; and especially why the frost plays such 'fantastic tricks' in a field of corn, nipping here and there some whole rows, and then again sparing nearly every alternate hill."

As to remedies, Mr. G. thinks it is "by no means certain that a remedy may not yet be discovered," and he advises that experiments be multiplied every succeeding year. His "chief hope," however, is that "in the course of a few years the cause of the injury in the atmosphere will gradually disappear."

Suggestions to Farmers.

I sometimes fancy to myself, when I hear persons who live on the rich and fertile prairies of the west, praise the luxuriance of their soil, and boast of the bountiful crops they yield with little labor, that they ought to be regarded somewhat as we now look upon those early settlers in the Mohawk valley, who, it is said, were in the habit of carting the manure made upon their lands to the river, and throwing it in, for fear, that should it remain, their lands would become too rich.

In their wisdom, supposing their lands could never be exhausted, they continued to plow the same fields, until at last "a change came o'er the spirit of their dreams," and they found to their cost, that the lands they supposed inexhaustibly fertile, had become sterile and unproductive; and such I think will be the result of the present system of cultivation pursued by our western friends. Chemistry shows us that by taking a succession of crops off from the same ground one year after another, without any return to it, the inevitable effect must be ultimately, that it will lose its fertility. The lands of our county, especially the richer portions of it, have quite too commonly met with this usage. A few years since it was not unfrequently remarked by our farmers, that they formerly received good crops from particular portions of their lands, but that then they could not get crops from the same ground that would pay the trouble of cultivation. Something, they said, must be wanting in the soil, but what they did not know. Chemistry has solved this problem, and it is now beginning to be understood by them, that their soil must be fed with proper food as well as their cattle if they would have it productive; and that true economy consists in highly cultivating smaller quantities of land, by deep plowing and manuring, rather than running over a large quantity of land with slight tillage.

> "A little farm well tilled. A large barn well filled.
> A little wife well willed, Give me, give me."

This lesson is one our farmers have been slow to learn. While it has been their practice in cultivating their gardens to resort to thorough tillage, and, as a consequence, they produce more from them than from any other equal portion of their land; in the raising of field crops the hint thus given them has been entirely neglected. It is supposed that the fruit and kitchen gardens in the vicinity of the city of London, occupy 20,000 acres of land, and that the produce of this land is sold for over $7,000,000, while in the most favored portions of farming lands in our own country, $500,000 would generally be considered a good product for the same quantity of land. Knowledge and experience will in time correct the errors into which our farmers have fallen in regard to cultivating their lands, and even now I think I see a bright prospect for the future, in the formation of agricultural associations, in the circulation of agricultural papers, and other periodicals; in the improvement of the farm stock; in the improved tillage and drainage of lands; and above all, in the increased attention given to the saving and use of manures. When these come to be well understood and practiced, we may confidently expect to see farms of 40 and 60 acres producing more, and returning a better and more certain profit to the farmer, than farms now do which contain many additional acres. ONEIDA.

Varieties of Wheat.

We have been experimenting some in the wheat line, having procured from Philadelphia, in the fall of 1846, some of the celebrated "Stewart," or "Etrurian" wheat, and also some of the "White Blue-stem," from Mr. Hunter, of Lycoming County, Pa., and some of the "Yellow Blue-stem" from our own neighborhood.

The Stewart wheat is a fine grain, and has a long head; but we could not tell so well how it would succeed, for the frost killed half or two-thirds of it. The other kinds stood the winter well; but the White Blue-stem is far the finest grain—has the longest head, and yielded a fourth more than the Yellow Blue-stem, although sowed side by side, on the same kind of ground. In fact, the White Blue-stem is with us every way equal to the Stewart wheat, without the danger of being winter-killed. We have sowed no other kind this year, and have distributed the seed among our farmers.

SUBSOIL PLOWING.—We have been trying the subsoil plow on our hilly land, and find it will fully pay in preventing washes by rain, besides being very useful in other respects. It causes the soil to act somewhat on the sponge principle; that is, if the ground is made mellow twelve or fifteen inches deep, it absorbs the water that will fall in an ordinary rain; whereas if only three or four inches of the surface is loosened, as is generally the case, it is soon filled with water, and a sudden dash of rain washes the soil away, leaving the fields cut up in gullies. JAMES L. COX. *Zanesville, O., Jan.* '48.

Good Hogs.

Much is said about good and poor breeds of hogs. I am willing to admit that there is all the difference ascribed, but the poorest breed that a man ever had is as good as any breed to many. I killed seven hogs this fall that averaged 455 lbs each. They were a year old last spring, except one, which was older, and weighed 580 lbs. These are not the heaviest hogs I *know*, but the breed is not extra, and there was no extra pains taken in keeping them. I sold them at $5½ per hundred, when lighter ones brought $4.75 and $5. I have some pigs now feeding which were dropped last March, that if dressed, would weigh over 300 lbs. each; they have been only middling well kept—not extra. The grain that I fed my hogs, aside from the dairy refuse, (which was whey,) was worth here just about $80. E. P. INGALLS. *Cape Vincent, N. Y., Jan.*, 1848.

Hints for March.

Cows and ewes, which are near the period of parturition, require attention. For three or four weeks before they bring forth, their food should be of such a nature as will impart strength to them and their offspring, and at the same time promote the secretion of milk. Brewer's grains, where they can be obtained, are among the cheapest and best articles that can be used. They may be fed to cows at the rate of a peck for each cow, per day, before calving, and a half-bushel per day afterwards. Sheep may be fed from one quart to three quarts per day. Where the grains cannot be had, a little corn or oats, for sheep—say a pint of oats, or from a gill to a half pint of corn to each, per day, and for cows, corn meal, or meal from corn and oats; or corn and cob ground together, at the rate of from two to four quarts each per day, will be beneficial. A few carrots—say a peck to a cow, and a quart to a sheep, per day—will greatly favor the secretion of milk, and may be given with advantage in addition to the meal or corn. The best of hay should be provided. Clover, cut before it was too ripe, and so nicely made that none of its heads or leaves have been lost, and is free from mustiness and dust, is not inferior to any other hay, excepting for working horses and oxen. The animals should have dry and comfortable shelter, and should not be exposed to storms.

March is the best month in the year for securing wood and timber. Wood should therefore be cut, split, and piled, that it may have the benefit of the drying winds which usually prevail during this month.

Hot-beds, if not already made, should be formed at once. Directions for making will be found in our last volume, page 85—also in vol ix, (old series,) p. 55.

Manures may be composted in this month, and will be sufficiently decomposed for use by the time they are wanted for spring crops.

Oats may sometimes be sown in the latter part of this month or beginning of April. It is always advisable to sow them as early as practicable, or as soon as the ground is in a suitable state. The best varieties of the Irish and Scotch oats are very heavy, and from some trials made here with them, appear to exceed in yield and value the common oats of this country. The Hope-Town oat is one of the best kinds. It is early, hardy, and productive. An advertisement of seed of this variety will be found in this number.

Agricultural Discussions.

Weekly meetings for the discussion of agricultural subjects, have been held at the Capitol in this city, since the 12th of January last. They have generally been better attended, and have been carried on with more spirit than in former years—circumstances indicative of a growing interest in agricultural investigation. This is evidently the case in most parts of the country. In Boston, where these meetings were commenced nine years ago, they have been continually increasing in popular favor.

Considerable interest is evinced in the reports of these discussions, and we have had various inquiries in regard to their publication; but as our work is only issued monthly, it would be impracticable to give them as early as would be desired. Besides, the great press of other matters at this season of the year, precludes their insertion in detail. They are published in the Albany *Evening Journal*, and will appear, (perhaps somewhat abridged,) in the Transactions of the State Agricultural Society.

At Boston, the reports of the discussions are published in three or four of the daily and weekly papers. This gives them an extensive circulation, and it would be an advantage if this course was adopted here.

The first subject taken up at the Albany meetings was that of Manures—their Properties, Action, &c. This occupied one evening, and a second evening was devoted to a consideration of the question whether manure should be applied in a fresh or fermented state—or under what circumstances it should be applied in either form. After considerable discussion the following resolution was unanimously adopted:

"*Resolved*, That in the judgment of this meeting, it is generally most expedient to apply manure in an unfermented state on clayey or stiff soils, and particularly for hoed crops, and that it should be well incorporated with the soil: on lighter soils, whether of a sandy or gravelly character, it is far more profitable to make the application in a fermented compost, for nearly if not quite every kind of crop."

At the third meeting, Dr. A. H. STEVENS, of New-York, delivered a very interesting lecture on "The Food of Plants;" and after its conclusion, the subject of Sheep and Wool—their Management and Preparation for market, was taken up for discussion. Mr. BLANCHARD, of Kinderhook, made some excellent remarks, generally in reference to the manner in which wool should be put up for sale, and the mode of disposing of it to the best advantage; in doing which he considered the expediency of establishing "Wool Depots," and demonstrated, conclusively, the advantage and superiority of the system for the advancement of the interest of the wool-grower, as well as for the convenience and accommodation of the manufacturer.

The same subject was continued at the succeeding meeting, and considerable interesting matter in relation to the breeding and management of sheep was brought out. At the close of the meeting, the following resolution was passed:

"*Resolved*, That we deem the establishment of wool depots for the sale of wool, well calculated to secure to the wool grower a fair and reasonable compensation for his wool, and that the system is worthy of a full trial."

Agricultural Societies.

WASHINGTON COUNTY, VT.—Officers for the present year—RODERICK RICHARDSON, Presidents; NATHANIEL EATON, HENRY NUTT, Vice-Pressdent; J. W. HOWES, Secretary; LYMAN BRIGGS, Treasurer.

WAYNE COUNTY, N. Y.—Officers, A. G. PERCY, President; N. B. CASWELL, Rec. Secretary; H. KNOWLS, Treasurer. Next Fair to be held at Lyons, on the 4th Wednesday and Thursday of September. Delegates have been appointed by this society, to attend the fairs of the adjoining counties, for the purpose of collecting useful information. Other societies would do well to adopt the same plan.

ONEIDA COUNTY, N. Y.—Officers, J. S. HITCHCOCK, President; H. RHODES, P. MATTOON, M. L. BUTLER, R. ELLS, W. C. BURRITT, P. NORTON, H. N. CARY, H. DUNBAR, W. FERGUSON, W. BRISTOL, Vice President; C. C. COOK, Cor. Sec'y.; E. Comstock, Rec. Secy; B. N. Huntington, Treasurer. Premiums were awarded at the annual meeting of this society for the following crops:—*Winter Wheat*, 39 bushels 8 1-2 lbs. on one acre. *Indian Corn*, 86 1-4 bushels, also 71 1-2; 67 1-8 bushels, another of 67 1-8 bushels, 66 bushels, each the product of one acre. *Barley*, 52 bushels, 35 pounds, also 49 bushels 24 pounds; 38 1-2 bushels—each the product of one acre. *Oats*, 85 3-4 bushels, 84 1-2 bushels, 76 bushels, each from one acre. *Peas*, 37 3-4 on seven eighths of an acre. *Potatoes*, 162 bushels on half an acre. *Carrots*, 201 bushels on a fourth of an acre. *Mangel wurtzel*, 325 bushels on a fourth of an acre.

THE JEFFERSON COUNTY (N. Y.) AG. SOCIETY, at its last annual meeting awarded premiums for the following crops. *Indian corn*, 86 bushels, 80 bushels, each from an acre. *Oats*, 74 bushels per acre. *Potatoes*, 347 bushels per acre. *Carrots*, 764 bushels per acre.

CHITTENDEN CO. VT.—Officers for the current year. HENRY S. MORSE, President; BIRDSEY NEWELL, LEMUEL B. PLATT, Vice Presidents; CASPAR T. HOPKINS, Secretary; JOHN S. PIERCE, Treasurer. The Society at its last meeting awarded premiums for the following crops. *Winter wheat*, 36 1-2 bushels and 30 bushels each for one acre. *Spring wheat*, 26 bushels per acre. *Indian corn*, 210, 209, 197, 191 bushels of ears each on one acre; calculated to be equivalent, respectively, to 105, 104½, 98½, 95½ bushels, of shelled corn per acre. *Oats*, 79 bushels, and 70 do. per acre. *Potatoes*, 195, 190, 189 1-2 bushels—each from half an acre. *Carrots*, 332, 280, 232 bushels—each from one fourth of an acre. *Peas*, 47 1-2 bushels from one acre. *Beans*, 30 bushels from half an acre.

VERNON AG. ASSOCIATION—Nathaniel S. Wright, President; Salmon Case, Willette H. Shearman, Elijah Wilson, Samuel H. Church, Vice Presidents; Levi T. Marshall, Vernon Centre, Cor. Sec'y; Luther R. Foot, Rec. Sec'y; Josiah Case, Treasurer.

Domestic Economy, Recipes, &c.

A convenient Swift.

Every man or boy who has kindly held the skein of thread or yarn on his extended wrists, to assist the housewife to wind it into a ball, until the *arm-ache* has compelled him to desist, will know the convenience of a simple machine to perform this task. The one figured below is so incomparably superior to anything of the kind we have ever met with, and besides appears to be so little known, that we are induced to give a description. It may not be new to some, as it has been in use for thirty years or more, yet we have scarcely ever met with it for sale in any shop in the country.

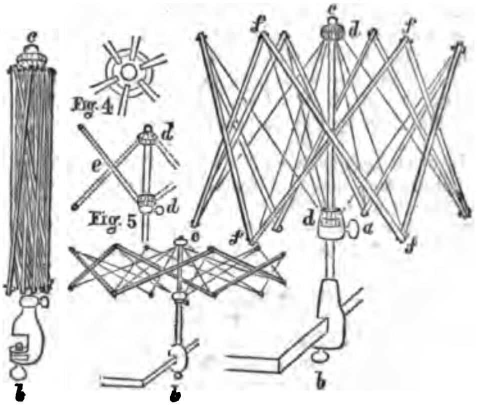


Fig. 1. Fig. 3. Fig. 2.

It may appear complex at first glance, but it is in reality admirable for its simplicity, and its strict mathematical ingenuity, which must strike every person who examines one already constructed. It may be folded in *one second* when not in use, and safely lodged in a drawer, or even put into the pocket if necessary. It is about eighteen inches in length when folded, and two inches in diameter.[*] Fig. 1, exhibits its appearance when not in use; fig. 2, when partly opened, and screwed to the edge of a table by the button *b;* and fig. 3 the same on a smaller scale, extended to its extreme limit. It is adapted to a skein of any length from six inches to three feet,[†] by raising or depressing the sliding ring, and fixing it by the button and screw *a*. The upright standard, *b c*, which is screwed to the table as shown in the figure, when in use,—is furnished with 2 circular rings *d d* for receiving the ends of the rods, and on which they form a turning joint, precisely like the 2 rings of an umbrella which receive the inner ends of the rods and braces. The upper one is immovable, the lower one slides freely. A cross section of one of these rings is shown in fig. 4, the dotted circular line being the wire which passes through the ends of all the rods, forming the joints. The rest consists of 18 slender pieces of wood or lath about 14 inches long; half an inch wide, and the tenth of an inch thick, with a hole at each end to receive a cord for fastening the ends together. Six of these are fastened by the moveable joint to the upper ring, and six more to the lower; and the corresponding upper and lower ones cross each other as shown in fig. 5, at the middle, *e*, where a rivet passing through both, forms a turning joint. The remaining six are fastened to the outer ends of these first twelve, by cords through the holes at the extremities, these last six also crossing each other by couples, and riveted as before mentioned, at the crossing point; as shown for instance by the two rods *ff*, *ff*, in fig. 2. To prevent confusion, the twelve inner rods are represented in fig. 2, by merely dotted lines.

We should think that the whole could be easily made for a dollar, being wholly of wood, except the wire and cords. We have used one many years, and it never gets out of order.

Tin Vats for Cheese.—A correspondent of the Prairie Farmer describes the tin vats which are used by the Herkimer cheese makers in this State with so much success, as follows:—One for a dairy of 30 cows is 2½ ft. wide, 6 ft. long, and 19 inches deep; set inside a wooden vat, so as to leave a space of 2 inches between them, that the tin vat may be surrounded with water. The night milk is strained into the tin vat, which surrounded with cold water, is kept till morning. After the morning milk is added, the water is heated by a steam pipe to about 84° by the thermometer. Rennet is applied, and the resulting curd scalded by the same way, at 104°. The whey is then drawn by a plug. One farmer, who has 70 cows, finds it about as easy to make cheese from them (weighing one hundred and fifty to two hundred and twenty pounds,) as from a dozen cows by the old process.

Female Industry.—The value of straw and palm-leaf hats, &c., made by females in Massachusetts in 1847, was $1,640,596.

Answers to Inquiries.

Emir or Skinless Barley.—W. A., Canajoharie, N. Y. We have but little information in regard to this kind of grain, in addition to what we have already published. That it is more "valuable" *per bushel*, as bread-stuff, or for stock than common barley, there is no doubt, as it is considerably heavier. Of its value for *malting* we know nothing. It is represented as hardy, and as yielding more *weight* per acre than the common kind. We suppose its chief recommendation, however, is its freedom from husk, which renders it more convenient as an article of food for families.

Sowing Carrots.—L. P., Proctorsville, Vt. On light soils, we should prefer leaving the surface level, and would sow the seed with a machine, in rows, fourteen to sixteen inches apart. If the ground is inclining to be wet and heavy, we should sow on ridges, which might be made by a small double mould board plow.

Hand or Horse-Mill.—W. J. B., Hillsboro, N. C. We know of no hand-mill that it would be an object to use for the purpose you mention. Fitzgerald's mill, which can be moved with one horse, but to much better advantage with two horses, will do a good business at grinding any kind of grain, and will make good flour or meal. The cost of the mill is $70.

Corn-and-Cob-Cutter.—C. L. T., Claridon, Ohio. Pitts' corn-and-cob-cutter will cut up corn and cob about the fineness of what is called "coarse feed," and can be worked with any two-horse power. They may be had here, or of the manufacturer, John A. Pitts, Rochester, at $40 each. Sinclair's corn-and-cob-cutter is manufactured at Baltimore. Md. It is said to do good work with a two-horse power. It crushes the corn and cob between cast-iron plates. Its cost is $32, with a set of extra plates. They may be had here or at Baltimore.

Saw to be worked by horse-power.—J. A., Morrisdale, Pa. We do not know of any two-horse power that would answer to saw "common boards" *from logs;* but a good endless-chain power, calculated for only one horse, would do well for slitting up boards or plank, in almost any form, or for cutting wood into any desired lengths.

Cheap Fences.—T., Bucks county, Pa. We would refer you to the last volume of the Cultivator, page 51, for descriptions of several kinds of fences, some of which would probably be adapted to your purpose.

Culture of Beans.—The kind generally preferred at the north is called the "pea bean." The usual distance of the hills is three feet by one foot, (or one foot and a half.) Twelve quarts of seed are used to an acre. They are planted from the middle of May to the first of June. The usual yield is from fifteen to thirty-five bushels per acre.

Docking Lambs.—S. W., North Easton, N. York. When the tails of sheep are allowed to remain their full length, the manure frequently attaches to them, and by this means adheres more or less to the wool with which the tail comes in contact, by which considerable injury is done the fleece. We suppose the object in cutting off the tail, is to avoid the consequences mentioned, and this object, we think is, in part at least, effected.

Apple for a name.—J. S. S., Bridgeport, Ct. Your apple has been examined by several judges of fruit, but no one can tell what it is.

Rat-Proof Granaries.—In the Cultivator of this month, you ask for suggestions in regard to a "Rat Proof Granary or corn crib."

Put your crib on cedar posts, four feet from the ground, tinning the posts one foot down, immediately under the crib sills and cover the top of the posts with a tin pan, like the ordinary milk-pan, inverted, or bottom next the sill; and if you will always remember to take away the steps by which you enter the door of the crib, you will not have rats or mice. A Subscriber.

Paterson, N. J., Feb. 3, 1848.

Death of Horses by Poison.—Seven horses belonging to Thomas Craig, of Philadelphia, were lost a few weeks ago, in consequence of the infusion of poison, by rats, into their feed; an adjoining stable, which was much infested by rats, having been plentifully supplied with poison, which they carried abroad.

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[*] That the wooden screw *b* may firmly hold to its socket, a wooden pin through which it passes, is driven into the base, as shown by the dotted lines in fig. 1.

[†] Very small ones, that may be put into the vest pocket, are sometimes made for winding skeins of silk, and other small articles of the kind; the above described is intended for large skeins of yarn, as well as smaller.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Postage of "The Cultivator."—We learn with surprise that several postmasters in different sections of the country, insist on charging "The Cultivator" with *pamphlet* postage. No one who will read the post office law, can doubt for a moment that the Cultivator is clearly a newspaper in the meaning of that law. Beside this, every Postmaster General, since the establishment of the paper, has *decided that it was subject to newspaper postage only*. We republish the decision of the present head of the Post-Office Department upon the subject:

Appointment Office, P. O. Dept, Feb. 14, 1846.

Sir—In reply to your letter of the 10th inst., I have to say that "The Cultivator," published at Albany, N. Y., in the form it which it is transmitted for the decision of the Department, is regarded as being subject to newspaper postage only. I am, sir, respectfully yours,

W. J. BROWN,
Luther Tucker, Esq. 2d Ass't. P. M. General.

Communications have been received the past month from R. H., S. A. Law, S. W. Jewett, Oneida, Bucks Co. Farmer, F. J. Scott, A Subscriber, R. K. Tuttle, F. Holbrook, A., Samuel Wilbur, J. B. Burnett, An Old Milker, J. Ten Broeck, W., C. E. G., F. J. Scott, H. R. Congdon, P. D. S., J. D., Andrew Bush.

Books, Pamphlets, &c. have been received during the past month, as follows:—Transactions of the Mass. Hort. Society, No. I., from the President M. P. Wilder Esq.—Transactions of the Worcester Co. (Mass.) Ag. Society for 1847, from Col. J. W. Lincoln.——Proceedings of Greene Co., (N. Y.) Ag. Society, from H.G. Day, Esq.——Rev. Dr. Allen's Historical Discourse, on the 40th anniversary of the gathering of the 2d church, Dorchester, from M. P. Wilder, Esq.——Ewbank's Hydraulics and Mechanics, Parts II and III, from the publishers, Greeley & McElrath, New-York.——Transactions of the Ohio Fruit Grower's Convention, held at Columbus in September last, from M. B. Bateham, Ed. Ohio Cultivator.——Lectures on Ag. Chemistry, before the Senior class of the University of Georgia, by Prof. J. Le Conte, M. D.——Report of the Buffalo Hort. Society for 1847.——Annual Report of the Mass. Insane Asylum, Worcester, for 1847, from Dr. Geo. Chandler, principal of the institution.——Transactions of Trumbull Co. (O.) Ag. Society, for 1847, from F. E. Stowe, Esq.

Elkanah Watson.—We have great pleasure in being able to present our readers this month, with a brief, but very interesting memoir of Elkanah Watson, Esq., the founder of the Berkshire Ag. Society, and by whose efforts the first Cattle-Show was held in this country. For a large portion of the facts embraced in this memoir, we are indebted to W. C. Watson, Esq., of Port Kent, who we are pleased to learn, is preparing for the press a memoir of his father, to embrace extracts from his Diary and Correspondence, a work which, from Mr. W.'s association and correspondence with the most prominent men of his age, both at home and abroad, cannot fail of being read with great interest. The Portrait, which accompanies the memoir, is engraved from one given in Mr. Watson's "History of Ag. Societies," published in 1820.

Wood's Patent Cast-Iron Plow.—A bill has passed the Senate of the United States, to renew the patent of Jethro Wood, for his improvements in the cast-iron plow, for the term of seven years. This patent was originally taken out in 1819, and has been once renewed, extending to a period of twenty-eight years. Without meddling with the question of the merits of Mr. Wood's claim to the improvements which were patented to him, we cannot but think that the patent should now be permitted to expire. Jethro Wood's plow was, it is well known, far inferior to the best plows of the present day. But it is claimed that few or none of these plows can be made without an infringement of Wood's patent. If this be the case, it would seem an act of great injustice to the farmer, to compel him to use a plow of the old patent of 1819, or to pay a tax of 50 cents for the use of a plow which later inventors have brought to a much higher state of perfection. Few can doubt but that Mr. Wood, or others for him, received in the twenty-eight years which his patent has already covered, an equivalent from the public equal to the benefit conferred. Had Mr. Wood followed up his improvement, and made a plow equal to the best now in use, there would have been more justice in the claim for the renewal; but as he left this work to be performed by others, it appears to us that neither his heirs nor those to whom he assigned large portions of his patent, have rightly any further claim upon the public for protection; especially as this protection cannot be given without positive injustice both to the farmer and to later improvers of the plow.

Horticultural Exhibition.—The meeting for the exhibition of winter fruits of the Albany and Rensselaer Horticultural Society, was held at the Agricultural Rooms, Albany, on the 11th of February. There was a handsome exhibition of apples and a few pears. Among the apples were the Swaar, Vandervere, Spitzenburgh, Seek-no-farther, Blue Pearmain, Roxbury Russet, Rhode Island Greening, Newtown Pippin, Northern Spy, Winter King, Scolloped or German Gilli-flower, Bristol apple—the two latter excellent apples not common here. The pears were a seedling from Henry Snider, of Kinderhook; and Inconnue of Van Mons, Easter Beurre, Prince's St. Germain from Dr. Herman Wendell, of Albany. Dr. Wendell received the first premium on pears, and W. Newcomb, of Pittstown, Rensselaer county, the first premium on apples. Dr. Beekman, H. Snyder, T. M. Burt, Peter Kingman, of Kinderhook, sent fine samples of apples, as did also Mr. Briggs, of Schaghticoke, Mr. Rhodes, of Albany, and Mr. Frost of Chemung county. Mr. Wilson, of Albany, made a beautiful display of camelias and other flowers appropriate to the season. Col. Rathbone, the President of the society, presented (through his gardner) some fine bunches of asparagus. We did not learn the particular mode in which it was produced.

Death of Henry Watson, Esq.—We learn with much regret that this gentleman died suddenly, at his residence in East Windsor, Ct., on the 27th January last. He was widely known as an active and enterprising agriculturist and stock-breeder, having been extensively engaged in rural pursuits for a period of forty years.

Rock Salt.—We invite attention to an advertisement of this article in the present number. It is the English rock salt in its crude state. It is in lumps, of the size of a man's fist to the size of a man's head. It is very hard, and will not readily dissolve; hence it is the very best kind of salt for feeding stock—as it may be placed on stones, or in troughs, in the pastures, and will not waste away; but the animals can obtain whatever they desire by licking it as their appetites prompt them. We recommend the article as the cheapest and best of the kind for the purpose mentioned.

Mr. Ayrault's Fat Oxen.—These oxen, which were noticed in our January number, we understand were slaughtered about the 1st of February. Mr. Mahoney, of this city, has furnished us with the following memorandum of their weight, which he received from Mr. B. Lawrence, of the Centre Market, New-York, who slaughtered the cattle, and sold their beef: Live weight of the two, 5,522 lbs.; dressed weight—quarters 3,650, tallow, 512, hide 214 = 4,376 lbs. They sold, alive, for $550.

Baldwin's Churn.—This article was invented by E. Baldwin, of Ballston, Saratoga Co., N. Y. The advatages claimed for it are—its simplicity and cheapness, and the small power with which it may be operated. It does not differ materially from the "cradle-churn," which has been used in some sections for many years.

Farmer's Clubs.—We are pleased to learn that these associations are increasing in the country, and that they are highly approved for their beneficial results. Mr. Guy Bigelow, of Colchester, Conn., writes us that an "Agricultural Association," was formed in that neighborhood in 1842. It was made a rule that not less than six, nor more than twelve men, with their wives, should "meet monthly at the residence of the members, in alphabetical order, and spend the afternoon and evening." Mr. B. says—"these meetings are considered interesting and beneficial. Each member pays into the treasury $1 annually, and has a copy of the Cultivator."

Manufacture of Cheese.—Mr. L. B. Maltby, of Trumbull County, Ohio, wishes information in regard to a steam apparatus used in the manufacture of cheese, which he has been told has been introduced by Mr. Gordon Farmer, of Mohawk, Herkimer Co., N. Y. If some person will give us a description of this apparatus, together with its expense, &c., they will confer a favor. Mr. M. also wishes information through the Cultivator, in regard to the mode of manufacturing the "Hamburgh cheese, of Erie county, N. Y." We hope some of our correspondents in that section will forward us the information called for.

Cultivator for Agricultural Societies.—At the last annual meeting of the Caledonian Co. (Vt.) Ag. Society, it was resolved, "That a copy of the Albany Cultivator, for one year, be furnished to those members who pay one dollar into the treasury the present year."

Ashes on Potatoes.—Mr. W. R. Webb, of Clark County, Ohio, states that in planting his potatoes last year, he used on a portion of the lot "about a shovelfull of leached ashes on each hill," and that on this part the potatoes were not hurt by the rot. On another part of the lot, where no ashes were put, two-thirds of the potatoes, as stated, rotted. Mr. W. inquires whether the ashes saved the crop. We can only say that the effect of ashes on the growth of potatoes is generally favorable; but in regard to the prevention from rot, results are so contradictory, that we would not venture a conclusion.

Smith's Corn-Sheller.—Elijah Willard, Esq. of Union county, Illinois, writes—"I purchased in St. Louis, Smith's Corn Sheller; it is now daily in operation, and shells, with three hands to feed it, one hundred bushels of shelled corn per hour; the work being done in a handsome and complete manner. It is attached to the Horse Power I bought of you last summer, and run by it."

Wheat in Indiana.—M. Averill, Esq., of Lima, La Grange county, Indiana, informs us that the wheat crop in that section, for 1847, was very light. It suffered much by the winter, and afterwards from the attack of the fly. In relation to the quantity of wheat on hand, Mr. A. says—"I see it frequently mentioned in eastern papers, that the '*Farmers of the West*,' were, to a great extent, holding back their wheat crop for spring market; but so far as the four counties in the north and northeastern parts of this state, and the south and southwestern counties of Michigan, and a *large part* of Illinois and Wisconsin are embraced in these conjectures, it will certainly be found to be *a great mistake*, as I believe there has not been a season in the last four or five years, when there was any thing like so *small* a quantity of surplus wheat, retained in the country as at this time; nearly the entire surplus went forward in the fall, and is sold."

Best manner of Wintering Stock.—At a late discussion in relation to the above subject, by the "North Stockbridge (Mass.) Farmers' Club," it was almost the unanimous opinion of the members, that it was best to feed wholly under cover, as being most economical, both as to saving of food and manure. Several farmers spoke of the benefit of feeding cows "rye mush" for a short time before they calve. It was also the general opinion that much loss was sustained by farmers, from their stock being allowed to get poor at the setting in of winter, and it was advised to guard against this by feeding well at first. It was thought that hay was generally cut too late. It was advised to feed stock a little at a time and often—five or six times in twenty-four hours.

Good Crops in Vermont.—The agricultural society of Washington county, Vt., awarded premiums for the following crops of Indian corn: 1st premium, 106 bushels per acre; 2d do. 100; 3d 86½; 4th, 80¼ bushels. In the latter case, the whole crop was shelled and measured; in the former cases two bushels of ears were taken as the equivalent of a bushel of corn. The same society also awarded premiums for the following crops of potatoes: 1st premium, 310 bushels per acre—variety, Long-Red, or Merinos; and 2d premium 286 bushels, round Pink-Eyes. (The same person also produced 285 bushels Long-Reds per acre.) The 3d premium 205 bushels per acre, Pink-Eyes. All the crops of potatoes were free from rot. They were produced, mostly, on "loamy" soil. Some of the crops having been on sward, broken up the previous fall, and others on stubble ground—oats, on sward, having been the previous crop.

Good Hogs.—H. K. Starkweather, of Northampton, states in the Massachusetts Plowman, that he killed three hogs, 17 months old, whose dressed weight were 410, 463, 570 lbs. The lightest one had a litter of pigs in August. Another hog of the same litter as the above, was killed in December, and weighed 450 lbs. They were a cross of the Mackay stock, derived from P. Lathrop, Esq., of South Hadley. Mr. S. attributes their superiority to the Mackay stock—says he took "far less pains than usual in fattening them," and that his old stock could seldom be brought, with any feeding, to the weight of 400 lbs.

Enormous Profits of Farming.—A correspondent of the Boston Cultivator, states the success of a man who left a lucrative business in the city of Philadelphia, for farming, to make a *profit*. After two years trial, he was asked if he did not find the profits small, compared with those of trade? He answered, "Quite the contrary; *I have already realized far more than the most* I had dared to anticipate, *and am, at the end of two years, richer than I ever could have become by twenty-five years of successful trade*. It is true I made more dollars and cents in trade than I do now, but that is *dross*, compared to the blessings of health of body, and peace of mind, which gold and silver could never purchase. I eat, drink, and sleep, with an appetite; yawn at bed time, and never in the morning; am up before the sun, and yet the day is never too long; and more than all, I have no acceptances to take up. Money! why what use have I for it? I raise my own food in the richest profusion, and my own clothing—my estate is annually increasing in value—then what is the use of money? I can't eat it or drink it, even if it were cut into mince meat."

Good Roads.—Lord Bacon regarded successful gardening as the last touch of civilization—"when nations grow to civility and elegancy, men come to build stately sooner than to garden finely"—but we slightly differ from him—*good roads*, it strikes us, are about the ultimatum. The rich, fertile, very narrow valleys in Hamilton county in this state, can never be valuable, because there is not land enough to warrant the working of good roads. Nearness to market—to say nothing of nearness to meeting—is worth a great deal to a farmer. Ten miles, through deep mud, in five hours with half a load, is quite a different thing from ten miles in two hours, over a fine smooth road, with full weight. What is the reason that farmers give so little attention to the improvement of their roads? The same deep mud-hole is plowed into by one hundred different teams for months together, when a few loads of gravel would make it fine. Or the same steep hill is ascended and descended fifty to five hundred times a year each, by a hundred different farmers, which a new road passing round the hill would wholly avoid. Farmers seem to be waiting for *plank-roads* to *grow*—and a friend has even suggested the plan of trying to procure some of the *seed* to sow along the rich bed of mud which connects all our towns and villages. We think, however, that even the laborious industry of the ancient Peruvians would be preferable—where, according to Prescott, roads of more than a thousand miles in length were made of huge flag-stones, connected by bituminous cement, the remains of which still exist.

Fecundity of Bees.—The number of bees in one hive, of strong stock, produced from spring to midsummer, is estimated at 20,000 to 30,000.

Long Tunnel.—A tunnel is now in construction 2¼ miles long, directly under the city of Liverpool, to connect the great railroad back of the town with the shipping in front of it. Many of the finest buildings will be only 50 feet above the roll of the locomotives.

Sewage Manure.—The report of the sanitary condition of the city of Sheffield, England, shows that the fertilizing substances carried off in the sewers of that town, which contains 110,000 inhabitants, is equal, annually, to the enriching power of 3,140 tons of guano, in value £30,000, or $140,000.

Merry's Museum.—This well known and popular journal for youth, is now published by G. W. & S. O. Post, New-York, at $1 a year. It is edited by S. G. Goodrich, author of Peter Parley's Tales.

Keeping Dried Fruits.—A correspondent wishes information in regard to preserving apples and other dried fruits through the summer season so that they will not become "wormy." Will some one tell us?

A good rule in awarding premiums.—In awarding premiums on cows and heifers, for the Essex county (Mass.) Agricultural Society, the committee say they have made it their aim to "reward the care and skill of the owners of cows and heifers, in training and keeping them in the best and most economical manner, rather than to reward *good fortune* in finding and purchasing those already trained and expensively fed by others. For this reason, where there were two animals equally balanced as to merit, the one purchased and the other raised and trained by the claimant himself, they thought it their duty to give the preference to the latter."

De Ruyter Farmers' and Mechanics' Association.—We learn that an association with the above title, has been formed at De Ruyter, Madison county, N. Y. Its object is the advancement of knowledge relating to agriculture, manufactures and arts. The officers are a president, three vice-presidents, librarian and treasurer. The association meets for four months in the year, (during the winter,) once in two weeks, and once a month for the remainder of the time. At those meetings, discussions are held on various subjects, and each person gives his own views and practice. We learn from the president, Hon. Benj. Enos, that a Library, consisting of the most approved works on agriculture and the arts, has already been commenced, and that it is intended to increase it by annual additions. Provision has also been made for the delivery of Scientific lectures before the association.

Another great benefit which will accrue from this combination of intellect and effort, will be the production of essays and articles on subjects connected with the business in which the members are engaged. Thus one person may take up a particular branch of agriculture—the cultivation of fruit or Indian corn or wheat, or the management of any kind of live stock—another person some department of manufactures or arts and show the whole philosophy, and the practical bearings and operations which are involved. Such papers would be highly interesting, and coming mostly from practical men, would receive attention.

We would suggest the adoption of the same system by Farmers' clubs, and similar associations.

The last Smithfield Cattle-Show.—As a matter of interest to many persons in this country, it may be well to preserve a record of the decisions made at the last show of the celebrated Smithfield Club, which took place in London from the 8th to the 12th of December last. There were one hundred and twelve fat cattle exhibited. This is a less number than has been brought out at some former shows, but the general quality of those presented on this occasion, was acknowledged to be superior to those of any previous exhibition. The prizes were more scattered among the various breeds, than they have generally been heretofore. In the six first classes, embracing oxen and steers, and containing twelve prizes, the Devons carried six, the Short Horns three, the Herefords two, and West-Highland one. In cows and heifers there were three classes, embracing seven prizes, of which the Short Horns carried three, mixed Hereford and Long-Horn one, Hereford one, mixed Hereford and Short-Horn one, and Long-Horn one. The Gold medal for the best ox or steer, was awarded to a Short Horn, and the Gold Medal for the best cow or heifer to a mixed Hereford and Long-Horn. The great contest among the oxen and steers appeared, to be between the Short-Horn ox of Mr. Manning, and the Hereford of Mr. Taylor. Both animals were four years old, and of a quality which it is said, "were never exceeded." The gold medal was finally awarded to the Short-Horn; though the decision of the judges has been somewhat controverted.

Apples in Alabama.—The Alabama Planter states that during the past summer the Mobile market was well supplied with apples, the growth of the immediate vicinity. Among them were "large greening pippins, [Newton] and russets of the Northern States. The first grew remarkably large." Trees brought from the north attain a large size in five or six years; and the standard winter apples of Massachusetts ripen by the end of the summer months. This early maturity and their large size, so alter the character of these fruits, that they would scarcely be identified with those of northern growth.

STATE OF THE MARKETS.

New-York, Feb. 18, 1848.

The latest foreign news has had but little effect on the Flour and Grain market. Genesee flour is firm at $6,25 a $6,37½—Ohio and Michigan, $6,12½. Genesee wheat is worth $1,35a$1,36—Corn, 55a57c—Rye, 90c—Oats, 40a42c—Barley, 80a85c. In provisions there is not much doing. Mess beef is worth $9 per barrel, and mess pork $9,75. Goshen butter, 20a22c. per lb.—western, 16a18c.; and Ohio, 12½. Cheese 6¼a7c per lb—Cotton, New Orleans and Alabama, per lb., 7a9¾c.—Upland and Florida, 7a8¼c. Wool is rather dull at about the same quotations as last month.

AGRICULTURAL IMPLEMENTS AND SEEDS.

Ruggles, Nourse & Mason,

Inventors & Manufacturers of the genuine Eagle Plows.

TO their extensive assortment of Plows they have recently added new patterns, embracing many important improvements, in form, construction and fixtures, which adapt them to both shoal and deep plowing. The peculiar form of the mould-board to take up the furrow slice and turn it over in the most perfect manner, with the least power of draft, leaving the soil in the best possible condition for after cultivation, and production of crops. The acknowledged strength and durability of the castings, the uniform construction and superior finish of the wood by machinery, are among the characteristics of their Plows.

At the most full, perfect trial and investigation of plows ever had in this country, held at Essex, county Mass., the Judging Committee, in speaking of the Improved Eagle Plow, to which they unanimously awarded the highest premium, say:—"As near as we can ascertain, this Plow combines all the good qualities manifested in either of the others, with some peculiar to itself;" and further, "our attention was called to the *quality* of the castings on the Plows of Ruggles & Co, their *finish* and *durability*. Their appearance is certainly more perfect than any thing we have elsewhere seen." "The process of Chilling the Point, the entire Edge of the Share and Flange or Base of the Landside, gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying that the value of the parts thus made is more than doubled by the process."

The following is a copy of their table showing the comparative amount of power in pounds, required to operate the different plows.

Medium Size Plows.

Winslows's	of Danvers,	462 lbs.
Ruggles & Co.,	of Worcester,	412 "
Prouty & Co.,	of Boston,	425 "
Howard,	of Hingham,	412 "

Large Size Plows.

Winslow	of Danvers,	512 lbs.
Ruggles & Co., Eagle,	of Worcester,	425 "
Prouty & Co., Sod A.	of Boston,	487 "
Howard,	of Hingham,	450 "

In 1846, the first premiums were awarded to competitiors who used Plows made by Ruggles, Nourse and Mason, at Plowing matches in the following named counties, to wit: Essex, Middlesex, Worcester, Hampshire and Berkshire, in Mass.; Orleans and Windham, Vt.; Kennebec, Me.; Litchfield and Hartford, Conn.; Prince George's and Montgomery counties, Md.

At the Cattle Shows held in 1847, the following premiums were won by Plowmen with Plows manufactured by Ruggles, Nourse & Mason.

ESSEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 2.
" "	3d Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 25.
" "	2d Premium,	"	Eagle Sward B.
" "	3d Premium,	"	Eagle No. 25.
Horse Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 2.
" "	3d Premium,	"	Eagle No. 2.
Subbsoiling,	1st Premium,	"	Eagle S. S. No. 1.

MIDDLESEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Doule Team,	1st Premium,	"	Eagle No. 20.
" "	2d Premium,	"	Eagle No. 20.
" "	4th Premium,	"	Eagle No. 25.
Horse Team,	1st Premium,	"	Eagle No. 2.

BRISTOL COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Sward C.
" "	2d Premium,	"	Eagle No. 2.
" "	4th Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 20.

BARNSTABLE COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Horse Team,	1st Premium,	"	Self Sh'ng No. 3.

HAMPDEN COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 1.
" "	6th Premium,	"	Eagle No. 2.

BERKSHIRE COUNTY, MASS.

1st Premium, and 7 others, Plows, Eagle Nos. 1 and 2.
1st Premium for the best Plows.

HAMPSHIRE COUNTY, MASS.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	7th Premium,	"	Eagle No. 2.
	8th Premium,	"	Eagle No. 2.

MERRIMACK COUNTY, N. H.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	2d Premium,	"	Eagle No. 20.
	3d Premium,	"	Eagle No 2.

WASHINGTON COUNTY, VT.

1st Premium,	Plow,	Eagle No. 2.

HARTFORD COUNTY, CONN.

1st Premium,	Plow,	Eagle No. 25.
2d Premium,	"	Eagle No. 2.
3d Premium,	"	Sward D.

ROCHESTER, MONROE COUNTY, N. Y.

Horse Team, only used	1st Premium,	Plow,	Sward C.
	2d Premium,	"	Eagle No. 25.

MONTGOMERY COUNTY, MD.

1st Premium for 3 horse size, Eagle No. 25.
1st Premium " 1 " " Self Sharpener No. 1.

They have also constructed a series of new patterns of plows of various sizes and forms, (some with wrought mould plates, shares, or points,) expressly calculated for the different *kinds* and *methods* of cultivation practiced in the Southern States, and which embrace all the alterations which a long and thorough investigation, and more extended acquaintance with southern culture has suggested, to render them peculiarly adapted to the wants of the planters.

Their stock of Garden and Field *Seeds* are raised especially for their trade, by most reliable and experienced growers, and are warranted fresh, and true to their names.

Their prices being *uniform*, purchasers can rely on having their orders executed on as favorable terms, and promptly as though they were personally present.

Dealers supplied on the most advantageous terms.

A supply of PLOWS and other articles from their establishment may be found at the stores of L. Tucker, Albany; A. B. Allen & Co., New-York city; R. L. Allen, New-Orleans; and at many other cities and principal towns throughout the country.

P. S. As it is impracticable here to give a detailed list of articles embraced in so great a variety, the proprietors propose to forward, (*gratis*) to persons requesting them, by mail or otherwise, descriptive catalogues of implements and seeds, of nearly 100 pages, embellished with cuts of tools, and embracing brief directions for sowing, planting and culture, rules for the application of Guano, Plaster and Bone Dust, with remarks on soils and plowing; and with general observations, list of agricultural and horticultural publications, &c. &c.

Worcester and Boston, Mass., March 1, 1848—3t.

OFFICE FOR PATENTS.

P. H. WATSON, Attorney and Solicitor of Patents, Washington, D. C., prepares specifications and drawings, and solicits letters patents for new inventions, in this country and in Europe; and transacts with promptness all business belonging to his profession, for which his charges are moderate.

Persons at a distance, by sending a model, or a pen and pencil sketch with a short description of an invention, by letter, may be informed whether it be patentable, and how the patent can be obtained, without the expense and inconvenience of a journey to Washington. Those who desire to send models, can do so with entire safety, by boxing them and forwarding them by any of the Expresses which run between this city and almost every part of the country.

He was at one period, for some years engaged in farming, and is also a practical machinest and millwright, and therefore, well qualified to judge of the utility and patentability of agricultural implements and machinery, as well as of improvements in the mechanic arts generally; and can readily understand the several parts of an invention from a rough drawing and description.

Those who may visit the city to make personal examinations of the models of patented inventions, records, &c., preparatory to applying for letters patent for their own inventions, would find it to their advantage to call upon him immediately upon their arrival, as he can furnish them with such information as will greatly facilitate the transaction of their business, and materially aid them in securing their rights.

Persons are frequently subjected to long and tedious delay and accumulated expenses, in obtaining patents, in consequence of having their papers and drawings imperfectly, or improperly prepared; and when obtained, after so much trouble and cost, the patent often fails to protect the invention, from the same causes which produced the delay. All these difficulties may be avoided by the employment of a competent and *faithful* agent residing at the *Seat of Government*, where he has daily access to the models and specifications of patented inventions, and other sources of information that do not exist elsewhere, which enables him to draw up specifications that will amply secure the just claims of the inventor, and at the same time avoid an interference with old inventions. By this means the rejection of an application is prevented, and a strong and valid patent secured.

For evidence of his competency and integrity, he would respectfully refer to all persons for whom he has transacted business.

Office on F street, between 7th and 8th streets, opposite the United States Patent Office. March 1, 1848—1t.

BLACK SEA SPRING WHEAT.

A SUPPLY of the above on hand at the Albany Agricultural Warehouse and Seed Store, Nos. 10 & 12 Green-St, Albany.

FRUIT TREES, *of Select Varieties,*

PROPAGATED from trees, whose genuineness or excellence has been proved by thorough examination of the fruit in bearing For sale at the nursery of the subscriber.

☞ Persons wishing to set out new Fruit Gardens or Orchards, will, if they wish, be furnished with a carefully assorted collection, either large or small, of apples, peaches, cherries, nectarines, apricots, strawberries, hardy grapes, &c., of the best standard varieties, which have been selected after several years careful personal examination, *from several hundred sorts in bearing.*

A fine select assortment of ornamental shrubs, brilliant hardy roses, herbaceous perennial plants, evergreens perfectly hardened for transplanting, &c.

Orders with remittances promptly executed, and trees packed in bundles so as to be sent with perfect safety by canal or railway. Catalogues furnished gratis to all applicants. All communications to be post-paid, and directed,

J. J. THOMAS,
Macedon, Wayne Co., N. Y.

March 1—2t.

ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D.. 310 Broadway, New-York, till the 25th of April, and after that time to Croton Point, N. Y., will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well, and produce good fruit when planted in most of the northern, and all of the western, middle, and southern States.

New-York, March 1—2t.

FRUIT AND ORAMENTAL TREES.

THE subscribers respectfully solicit the attention of fruit growers and dealers in trees, to their large stock offered for sale the ensuing spring. consisting in part of

FORTY THOUSAND APPLE TREES

of the most esteemed varieties, from 4 to 8 feet high, at $12 to $20 per 100; and $100 to $150 per 1,000. 8,000 trees of the Northern Spy, (one of the very best and long keeping apples known,) 5 to 7 feet high, 37½ cts. each, or $25 per 100—3 to 5 feet high, 25 cents each, or $18 per 100. 1,000 trees of the Early Joe, (a new and delicious summer apple, ripens August and September.) strong yearling trees, 25 cents each. A few hundred trees of the Melon, a native apple of western New-York of the highest excellence—described in the Horticulturist of February, 1848—price 50 cts. each. A number of select varieties are worked on *Paradise* stocks, adapting them to small gardens. These are one year from bud, of vigorous growth.

TWENTY THOUSAND PEAR TREES

of various sizes, from 3 to 7 feet high, embracing upwards of 200 of the best varieties to be found. 6,000 of these are on quince stocks (mainly one year from the bud but very vigorous) just right for training as *Dwarfs*, *Espaliers* and *Pyramids*. A few hundred trees each of the Swan's Orange or Onondaga, and the Belle of Brussels, (two unrivalled large rare fruits,) also Oswego Beurre, mostly strong yearlings, at $1 each.

FIFTEEN THOUSAND CHERRY TREES

from 4 to 9 feet high, of the finest sorts, 5,000 of them being 2 years old from the bud, with fine heads. Price $25 to $40 per 100. A few hundred fine trees can be supplied, budded on the *Cerasus mahaleb*, forming dwarf trees adapted to garden culture.

TWELVE THOUSAND PEACH TREES,

vigorous and free from all diseases, of 25 best market sorts; at $12 to $18 per 100, and $100 to $150 per 1,000.

Also, a large stock of all other hardy fruits, as well as

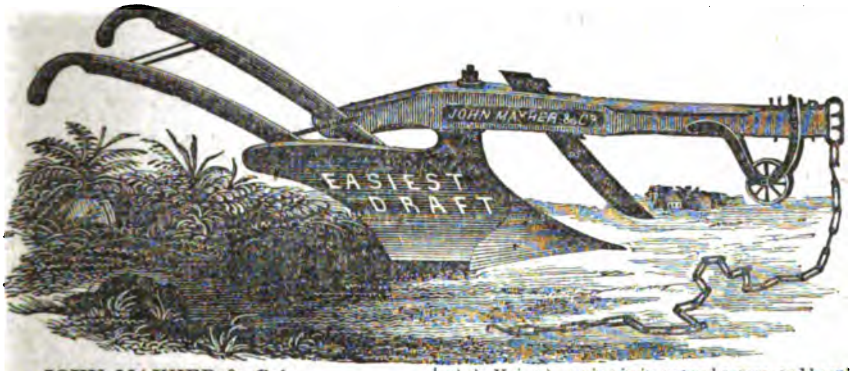
ORNAMENTAL TREES, SHRUBS, ROSES, &c., &c.,

at low rates by the quantity. The correctness of every article guarantied.

Orders promptly executed, and trees and plants packed for safe transmission to any part of the United States, Canada, or Europe. Priced descriptive catalogues of Nursery and Green House department, sent gratis to post-paid applications. Address

ELLWANGER & BARRY,
Mount Hope Garden and Nurseries, Rochester, N. Y.

March 1—1t.



JOHN MAYHER & Co's.

Highest Premium Improved Eagle Plow,

Manufactured and sold at the United States Agricultural Warehouse, 195 *Front-St., N. Y.*

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to cut out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island October, 1847, whose able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the whole Union,) running in its natural course, and keeping in its true position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Sneaths, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER & Co.,
United States Ag. Warehouse, No. 195 Front-st., N. Y.

March 1, 1848—3t.

AGRICULTURAL AND GARDEN SEED WAREHOUSE.

RITCHIE & EADIE, 139½ Market-street, Newark, N. J., beg to announce to their friends and the public that they have on hand their spring assortment of Garden, Field and Flower Seeds, the greater part of which having been raised by themselves, they can with perfect confidence guarantee as pure and of good quality. Merchants and others who sell again will be supplied by the pound or bushel, or with boxes containing papers neatly closed and labelled, ready for retail on the most reasonable terms.

The subscribers have also constant communication with the best Nurseries in this country and Europe, and supply fruit and ornamental trees of every variety on the most favorable terms. Ladies and gentlemen will find this a good channel for obtaining any specified varieties of fruit or ornamental trees, shrubs, &c. They also supply all sorts of Agricultural Implements, Corn Shellers, Straw Cutters, Ploughs, Cultivators, &c. &c. of various qualities and the most approved constructions.

The subscribers are also agents for the Cultivator and Horticulturist. Catalogues furnished on application, if by letter post-paid.

Newark, N. J., March 1—1t. RITCHIE & EADIE.

FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and outhouses are new and convenient. A fine large orchard, embracing all kinds of choice fruit trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the west.

March 1—3t. A. H. NICHOLS.

A VIRGINIA FARM AND WATER POWER FOR SALE.

A BEAUTIFUL and highly productive Farm of 350 acres, on James River (west), of which a large proportion is low grounds, situated near Richmond. The canal running through it—well adapted to wheat, corn and tobacco. The situation is one of the most commanding and beautiful to be found; is healthy and well watered, and has a good market for all vegetables, meats, &c. There is a crop of wheat, new seeded. There are also two or three good water sites, with a plentiful supply of water for a factory of any kind; a most excellent dwelling, and all kinds of outhouses, such as barns, corn houses, negro quarters, overseer's house, stables, cow houses, threshing machine.

The property is now in excellent order, having just been all thoroughly done up and repaired; and the purchaser will not need any outlay after the first cost. It is well known, by actual survey, to possess valuable minerals, such as coal and iron. The whole will be sold very low, if application be made before the tenth of April next; and the purchaser can take, at his option, all the tools, stock, crop. And for particulars, apply to A. B. C. D.,
Richmond P. O.; or to
March 1—2t. LUTHER TUCKER, Esq.,
Editor Cultivator.

OSAGE ORANGE, YELLOW LOCUST, AND BUCKTHORN SEED.

THE above, together with a general and complete assortment of fresh Field and Garden Seeds, for sale by

A. B. ALLEN & CO.,
Feb. 1, 1848—tf. 187 Water-st., New-York.

SEED SOWERS.

FOR sale at the Albany Ag. Warehouse, a large supply of EMERY'S SEED SOWERS, on hand, and being made for spring sale. The manufacturer has been awarded the N. Y. State Ag. Society's first premium. He also received the first premium at the Fair of the Mechanic's Association, held at Boston in September last. Feb. 1, 1848. H. L. EMERY.

NEW AGRICULTURAL WAREHOUSE.

SAMUEL C. HILLS, No. 189 Water-st., New York, offers for sale Prouty's Plows and Horse Rakes, Wilkinson's Harrows, Corn Mills, Corn Shellers, Straw Cutters, Horse Powers, Churns, Grain Cradles, Scythes, Hoes, Rakes, &c., &c.

Patents secured upon moderate terms, and patent articles and rights bought and sold on commission.

New-York, Jan. 1, 1848—3t.

GRAPE VINES.

10,000 Isabella Grape Vines; **6,000** Catawba do.; **4,000** Aleaxander or Muscadel do; of suitable age and size for forming Vineyards. **1,250** Catawba Vines, four years old, will produce fruit in 1848, suitable for gardens. For sale in large and small quantities on the best terms. Purchasers of vines from the subscriber will receive, free of charge, a practical treatise (just ready for the press) on the cultivation of American Grape Vines, and the manufacture of Wines, treating particularly of soil, location, planting of vines, manuring, training and pruning, illustrated with plates. Vines will be packed so as to be sent to any part of the world with safety. Letters of inquiry, *post paid*, promptly attended to. Apply to B. G. BOSWELL,
Feb. 1—2t. 230 Pine-st., Philadelphia.

15,000 Buckthorn Plants.
10,000 Osage Orange Plants.
Also, Buckthorn Seed by the pound or bushel. For sale by
Feb. 1. L. TUCKER, Ag. Warehouse.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: A *very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

ENGLISH AND FRENCH GRASS SEEDS.

THE subscribers have just received from England and France, a superior lot of *fresh* Grass Seeds of various kinds. Among these are the Perennial and Italian Ray Grass, Sweet Vernal and Oat Grass, fine mixed Lawn Grass, White Clover and Lucerne, English Beans, Vetches, &c., &c. A. B. ALLEN & CO.,
Feb. 1, 1848—tf. 187 Water-st., New-York.

FRUIT AND ORNAMENTAL TREES, GRAPE-VINES, &c.

BLACK Hamburgh, White Muscat of Alexandria, Royal Muscadine or Golden Chasselas, Early White Sweet Water Grape Vines. strong plants, raised from single eyes in pots and shifted, roots two years old and abundance of them, stems one year old, 6 feet ripe wood, price $5 for 6—$9 per dozen: *Cash with the order*. Taken out of the pots, carefully packed, the roots with the balls of earth in moss, and forwarded from New-York as directed. Also, good one year old plants of the above and other foreign varieties, at $6 per dozen; and superior *Isabella* vines, 3 years old, for speedy bearing—$4 for six, and $7 per dozen: packed, &c. Also, other native varieties, and every description of *Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c*, including the newest and choicest varieties, for sale *at moderate prices*, at the *Ancient* and *Real Linnæan Botanic Garden and Nursery*, late of *William Prince*, deceased, Flushing, L. I., near New-York. Descriptive Catalogues gratis, on application *post-paid*.

Feb. 1, 1848—2t. WINTER & Co., Proprietors.

FINE BLOOD MERINO SHEEP FOR SALE.

THE subscriber being about to retire from the farming business, offers for sale his entire flock of Merino sheep, which have been bred with the greatest care from the best flocks in the country. Of these 75 are ewes now with lamb by a buck from the recent imported flock of John A. Taintor, Esq., of Hartford, Conn.; 25 bucks one year old last spring from the above ewes, sired by the Rambouillet buck Chancellor; and 50 lambs the increase of last year, sired by the Rambouillet buck Grandee, now owned by the Rev. L. G. Bingham, of this place. As to purity of blood, fineness and weight of fleece, and strength of constitution, they are excelled by no Merinos in the country. The buck purchased from the recent importation of Mr. Taintor will also be offered for sale. To those wishing to improve their sheep, or those wishing to start a good flock, the present offers a rare opportunity, as they will be sold without reserve. Communications addressed to the subscriber will receive immediate attention THOS. D. CANFIELD.

Williston, Vt., Jan. 15, 1848—3t.

THE AMERICAN ARCHITECT.

Published Monthly, at $3 per annum—Single numbers 25 cents—by C. M. Saxton, 205 Broadway, N. Y.

THE object of this publication is to introduce ORIGINAL DESIGNS of *Country Seats*, adapted to the varied tastes and circumstances of an American population—from the elegant Villa to the simple Cottage and plain Farm-House; from Planters' Mansions to Village Domicils. In a word, every variety of Rural Residences will be embraced in order to meet the views of every person desiring a Country House. In respect to style, cost, arrangement, finish, &c., utility will never be sacrificed: economy in the outlay, with an appropriate style, will always be kept in view. The requisite details, specifications, plans, and directions, with a careful and reliable estimate of the cost, will accompany each design. These are essential features of a *Practical Work*—and no labor will be spared in their preparation.

Of the diversity of human dwellings, whether marked by elegance, convenience, or utility, or by the want of them, none can compare in national importance and philosophical interest with the FARM HOUSE—the Homestead of our species.

The selection of designes by those about to build Country Residences, is commonly attended with embarrassment, and always with expense. When furnished by professional men from general ideas communicated by proprietors, they are seldom satisfactory. The AMERICAN ARCHITECT, by furnishing a collection of designs adapted to all tastes and means, will remove every difficulty in the choice, and save money expended on plans of no use. It will furnish 12 Elevations, Plans and Specifications in each year, at a price not exceeding one seventh of the usual charge for one.

"The price is only 25 cents for each number, and it is surely next to impossible but that such a periodical will obtain a wide circulation."—*N. Y. Tribune.*

"This work promises to supply a want which has long existed, and to be of essential value."—*Salem Register.*

"This work cannot fail to be useful and popular."—*Boston Bee.*

"This is a good and beautiful work, and well adapted to effect a much desired reform in Am. Architecture."—*Boston Trav.*

The *cost* of building from the plans given, will be from $600 to $5000, with complete specifications from a first rate Mason and Carpenter, and the prices given can be depended upon.

New-York, Jan. 1—3t.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

20,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5.000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8.000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1.000 Cherry Trees, 6 to 9 feet high.

10 to 15.000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. THORP & SMITH.

Syracuse, N. Y., Nov 1—6t.

N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATOES,

COMPRISING several sorts of Pinkeyes, Russets, Purples, Reds, Whites, Rareripes, Orange, and others not yet fully developed. All purely Seedling—the product of a careful and expensive experiment of six years with the seed from the balls and its Seedlings in alternate reciprocal culture *Reciprocal*, because in each rotation the seed improves the Seedlings, and the Seedlings the seed. By this method of culture these potatoes have acquired a *healthy* and *early* character, are *very productive* and of the *finest quality*. Having been for so many years in succession planted in April. (in their seed,) and early harvested, they have become *constitutionally* what they are, and with early planting, early digging, dry and airy storage, they will prove *sound* and *durable*—and the method continued, the development of new varieties and improvements will also continue.

Also, "N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATO SEED." This seed was gathered in the balls last September from a four acre crop of Seedlings, from improved seed sown in April last. Six years alternate reciprocal culture with its Seedlings, has given it an *early* and *very productive* character. It will produce Seedlings of the size of small birds, eggs as early as in May. Season favorable, with good culture, it will produce the first season sown, about 200 bushels per acre, a good proportion of marketable size, sufficiently mature for the table, and seed balls in abundance. Tubers of the weight of 12 oz. were quite common among the young Seedlings last fall, and on the roots of many single plants were found fully set and growing, hundreds of Seedlings, though when so numerous, mostly small. In addition, this seed is impregnated (by the pollen in the blows) with choice varieties, late from Germany, England, South America, Albany, Illinois, and home markets—mostly Seedlings, interspersed for that purpose in the field; and it will represent, when culivated, all the distinct varieties grown in that field. besides an amusing freak of motling, tinting, and originality. The seed may be sown in April like tomatoes, in a warm bed. Bleached cotton cloth, tacked on frames for potato beds, is better than glass. The beds should be open to warm rains and to all warm weather. The same hands in a given time will transplant with the young plants more ground than can be planted with tubers. (*Particular* directions accompany the seed.) These potatoes and seed were represented at the two last State and County Agricultural Fairs, and the first premiums awarded them. The cultivation of these potatoes and their seed will be continued at Buffalo with every possible improvement. Seedlings of approved varieties carefully packed in chaff, and delivered at the wharf or depot in Buffalo, $5 per bushel—$10 per barrel. Transportation safe from frosts after February. Seed per paper—sufficient to produce 10 bushels—$1, with directions. It may be conveyed by mail with double postage. Orders and communications, post-paid, will receive prompt attention.

Buffalo, Jan. 13, 1848—3t. N. S. SMITH.

Extract from the Report of the Committee on Vegetables at the last New-York State Fair.

"The committee on vegetables have reported, that for the greatest and best varieties of Seedling potatoes of approved varieties, they award the premium of ten dollars ($10) to No. 73, presented by N. S. Smith, of Buffalo, N. Y. These potatoes were grown by the Rev. N. S. Smith, of Buffalo, who has favored us with the manner of their cultivation and production. He has been six years cultivating them from the balls that grow on top of the vines; his method is the alternate planting of the seed and tuber or potato, taking care to select always the best varieties He has presented at the fair as a specimen of his crop this season, thirty varieties of Seedlings, all of them evidently of fine quality. His specimens of this year's Seedlings, from the seed of his best Seedlings, are very fine. He presents, also, fine specimens of Seedlings from seed of Seedlings grown last year in Prussia, Germany, and fine varieties late from South America. Mr. Smith is confident, and the Judges favor the opinion, that in his experiments a great improvement in the potato is already accomplished; and he hopes to be able to obtain permanently, potatoes not only of the finest quality, but perfectly sound and hardy. The judges would recommend the attention of farmers to his specimens on the ground, and also to his mode of cultivation." Signed by DAVID GRAY, Chairman.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

JUST PUBLISHED, AN ILLUSTRATED TREATISE ON

DOMESTIC ANIMALS,

Being a History and Description of the Horse, Mule, Cattle, Sheep, Swine, Poultry, and Farm Dogs.

WITH directions for their Management, Breeding, Crossing, Rearing, Feeding, and preparation for a profitable market. Also, their Diseases and Remedies, together with full directions for the Management of the Dairy, and the comparative economy and advantages of working animals, the Horse, Mule, Oxen, &c. By R. L. ALLEN, author of "Compend of American Agriculture," etc.

The above work contains more than FORTY ENGRAVINGS and PORTRAITS of improved animals, illustrative of the different breeds and various subjects treated in it.

The most minute as well as general principles for breeding, crossing, rearing feeding, and management of all domestic animals. are herein given, to produce the utmost marketable value for the food and attention bestowed on them; as well as to prevent disease, and save the immense losses which annually occur from this source.

The diseases of animals are also fully treated, with their remedies, management, &c., &c. Published by C. M. SAXTON, 205 Broadway, N. Y.

Price, 75 cents, elegantly bound in cloth.

New-York, Jan. 1, 1848.—3t.

MOUNT AIRY AGRICULTURAL INSTITUTE.

THE subscriber having rented the MOUNT AIRY FARM, the late residence of James Gowen, Esq., with all its extensive and eligible appliances for the purposes of a *Farm School*, will remove his school, now the Duchess Agricultural Institute, of Duchess Co., N. Y., to the above place, where he will open for the summer term on the first Thursday of April next; after which it will be known as the Mount Airy Agricultural Institute.

The winter term will commence on the first Thursday of October. This farm, which is located on the Germantown road, 7 miles from Philadelphia, Pa, having been so long known as the model farm of the United States, the site being proverbially beautiful and healthful, a minute description is deemed unnecessary; suffice it to say, that it presents every inducement and desirable facility for the establishment and maintenance of an Experimental, Practical and Scientific Agricultural Institute.

The course of instruction will be such as to give the students every facility for acquiring a thorough knowledge of Scientific and Practical Agriculture, with the use of the best modern farm machinery and implements, together with a select farmer's library, including numerous Agricultural Periodicals. Instructions will also be given in all the collateral branches requisite to insure the great desideratum which it was the object of the founder and Principal to supply by an education commensurate with the exalted destinies of a landed interest.

Chemistry and the other Natural Sciences receive particular attention—lectures with full experimental illustrations being connected with each course. The Zoonic course will commence with the Horse, a perfect skeleton of which being provided for illustration.

The best facilities are also afforded, that those who desire may here acquire a Commercial Education, to the end that they may lay the foundation in youth of a future life that shall be agreeable, healthful and useful.

Fee for the year, $200, payable semi-annually in advance This sum includes Tuition, Board, Washing, Fuel, and Lights. An extra charge of $12.00 per annum will be made for pupils not furnishing their own bedding and toilet furniture. The modern languages $10 each extra per term, as also drawing.

This Institution is under the patronage of the American Agricultural Institute, the Farmer's Club of the American Institute, and the Duchess Agricultural Society.

For further particulars address JOHN WILKINSON,
Principal of the Duchess Ag. Institute, Poughkeepsie, N., Y., and after the 20th of March at the Mount Airy Agricultural Institute, Philadelphia, Pa.

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Feb. 1, 1848—2t.

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HIGHLAND NURSERIES, NEWBURGH, N. Y.

NOTICE—A. J. Downing having retired from the Nursery business, heretofore conducted at this place under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which those nurseries have had, but as the present stock is gradually drawn off Mr. Downing's grounds they will greatly enlarge the nurseries, and fully endeavor to meet the constantly increasing demand for trees grown here. A. SAUL & Co.

February 15th, 1847.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. Saul, who has been at the head of this department for the last eight years, and his accuracy and fidelity in the propagation of fruits, and general care of nurseries during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted. A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15th, 1847.

A. SAUL & Co. beg leave to inform the patrons of this establishment and the public in general, that their stock of

Fruit Trees for Spring Planting, 1848,

Comprises nearly all the choice and rare varieties of recent introduction, among which are a fine stock of the *True Peach Plum*, (Prune Peche,) and Dubois' Early Golden Apricot, as well as a large stock, and full assortment of all the leading standard varieties; all propagated from *tested* fruit trees, or the most correct sources, under the personal supervision of A. Saul.

Their stock of ornamental trees is unusually large, (for particulars see Cultivator for October and November, 1847. Also Shrubs, Roses, Vines, &c. &c.: and as they propose clearing a large portion off of Mr. D.'s grounds this spring, to their new grounds, (40 acres,) they will dispose of a large portion of it at reduced rates to nurserymen, or amateurs who want to plant largely for the embellishment of new places. Also a fine stock of

5,000 American Arbor Vitæ, for screens, $15 to $30 per 100.
10,000 Osage Orange plants for hedges, $12 per 1000.
20,000 Buckthorn plants for hedges, $8 per 1000.

Orders addressed as above, *postpaid*, will receive prompt attention, and all trees, plants, &c. will be carefully packed and shipped to any part of the Union. Catalogues gratis to postpaid applicants.

Highland Nurseries, Newburgh, Feb. 10th, 1848.—2t.

HOPE-TOWN OATS.

FIFTY bushels Hope-Town Oats, raised expressly for the Ag. Warehouse and Seed Store, from seed imported the past season by the proprietors. They are much earlier than the ordinary oats raised here, ripening when sown side by side some two weeks in advance—yield well, and the kernel is large and heavy. Price, $1 per bushel.

For sale at the Albany Ag. Warehouse, Nos. 10 & 12 Green-St., Albany.

EAGLE PLOWS.

A FULL and complete assortment of the celebrated Eagle Plows, from the manufactory of Messrs. Ruggles, Nourse and Mason, constantly on hand and for sale at *manufacturer's home prices at wholesale and retail*. For prices, descriptions, &c., &c., see Catalogue of Albany Ag. Warehouse, furnished gratis at the Store Nos. 10 & 12 Green-st., or by mail to post-paid applicants. March 1.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the Patent Office, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine, will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.
March 1—6t*. 128 Fulton-st., New-York.

FRUIT SCIONS.

THE subscriber can furnish Scions cut from the celebrated "Northern Spy" Apple Trees for this season's grafting, at $1 per 100.

All orders per mail, with cash enclosed and postage paid, shall be attended to. They can be sent by Express or Mail to any region of country. Address me at Rochester, Monroe Co., N. Y.

March 1—1t*. JAMES H. WATTS.

POUDRETTE.

THE LODI MANUFACTURING CO. offer for sale their New and Improved POUDRETTE, at the following reduced prices: One barrel, $2; three barrels, $5; and seven barrels and upwards at $1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels ($3 worth) will suffice per acre, and bring a good crop; the labor being less than one-half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B. Allen & Co, agents, No. 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t*.

TO BREEDERS OF FAST HORSES.

THE celebrated Stallion Colt "ANGLO-SAXON," will stand for the ensuing season, at the farm of *Josiah Crosby*, in North Andover, Mass. "Anglo-Saxon" was sired by the original Black Hawk, now owned by the Messrs. Hill, in Vermont. He will be four years old in July next. His color is a bright bay. He weighs a thousand pounds, and though not entirely broken to harness, has great speed and splendid action. He took the first premium at the last Fair of the Essex County Agricultural Society; and has been pronounced by amateurs a *perfect* animal. Like the rest of the "Black Hawks," he needs no encomium. Breeders are requested to examine and judge for themselves.

The "Lady Lawrence," a five years old chestnut mare, sired by Black Hawk, may be seen at the same stable. She can trot her mile in two minutes and forty seconds—has never been trained, and can be bought for $1000, if applied for immediately.

North Andover, March 1st, 1848.—2t*

A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in in front; has sixteen apartments, including kitchens and cellars. A frame bank barn, with stone basement, 63 by 38 feet; the corner posts twenty-two feet six inches high. With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr. Samuel Lawrence of Lowell, Mass., or Messrs. Perkins and Brown of Springfield, Mass. For terms apply on the premises.

February 7th, 1848.—3t.* JOHN SMART.

THE CULTIVATOR
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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, APRIL, 1848. No. 4.

THE FARM OF E. PHINNEY, ESQ.

EDITORS OF THE CULTIVATOR—Having recently enjoyed the kindness and hospitality of this gentleman and his pleasant family, in a short visit to his beautiful and highly productive farm in Lexington, Mass., and having found much, very much, to admire and approve, I know of nothing which I can furnish for the columns of your excellent journal, that may be so useful and instructive, as an account of some of the practical operations of this intelligent, skilful, and long experienced farmer.

In a recent letter to me, Messrs. Editors, you were pleased to say,—"there is at present a large class of agricultural readers, who have gone to farming, from the shop, store, offices, &c., who read much more than the old stock, and who absolutely require all the details of *farming*." This fact, coming from so high authority, *I regard* as full of promise for the future improvement of our agriculture; since this class of readers, *being* free from *old* prejudices, will have their minds open to *truth*, even if that truth should be found lurking under the head of "modern improvements." To this class my present observations will be more particularly directed; and, avoiding all glowing descriptions of this beautiful farm, which might be very properly given by an abler pen, I shall content myself with the more humble, but I trust not the less useful detail of farm management.

When Mr. PHINNEY commenced, some twenty-five years ago, his farm presented a most forbidding aspect. The soil was covered up with stones and bushes, shrub oaks and pines, so as to be literally inaccessible for cultivation; the fences were in a miserable condition, and what land had been cultivated, was worn out in vegetable substance under the "skinning" system. He debated with himself, for some time, whether an investment might not be made here, in the removal of these obstructions and the improvement of the soil, that would be judicious, and in the end profitable; and although men of less agricultural skill and enterprise, would have shrunk from the undertaking, he commenced and persevered. It must now be apparent to any practiced eye, that on this farm are the elements of liberal and sure reward for all former toil and expense, let the world go as it may.

It is almost incredible how much the hand of skill and diligence has done on this farm, in removing the obstacles to cultivation, and converting barren and unproductive wastes into fruitful fields. The secret, however, is clearly revealed in the following remarks, found in an address delivered by Mr. Phinney himself, before the "Middlesex Society of Husbandmen," several years since, which are so much more to the purpose than any thing I can offer, that I cannot forbear the quotation:—

"It is true, that the wealth of the opulent has done much, but mental research and a spirit of inquiry, accompanied by the personal inspection and persevering efforts of the practical farmer, have done much more to increase the produce and improve the condition of our farms.

"This is most forcibly illustrated by Pliny the elder: 'Furius Cresinus, an emancipated Roman slave, having obtained from his very small estate, much larger crops than his more wealthy neighbors from their vast domains, they became so envious, that they charged him with employing enchantment, to attract into his grounds the produce of their fields. Having been summoned by Spurius Albinus, and being fearful of condemnation, he introduced into the forum, as the tribes prepared to vote, his robust and well clad family, and his agricultural implements, his heavy mattocks, his ingeniously constructed plows, and his well fed oxen, and then exclaimed—Behold! Roman citizens, my magic; but I am still unable to show you, or to bring into the market place, my *studies*, my constant *vigilance*, my fatiguing *labors*. Scarcely had he concluded, when he was absolved by public acclamation.'"

"It is in enterprise, study, unremitting study, vigilance and industry, more than in *money*, that the mystery of great crops and successful husbandry consists."

REMOVING STONES AND BUSHES.—The task of removing the stones and the growth of shrub oaks, and other bushes, is immense, a ton's weight of the former being, on an average, generally taken off from 6 or 8 feet square of ground. In addition to innumerable stones of from ten to one or two hundred pounds weight, are larger ones, imbedded mostly in the soil, weighing several tons. These are taken out by digging away the earth around them and blasting; the object of the first blast being to open a seam, and then the second blast splits the whole mass into several pieces, and throws it out of its bed; the work being done generally in autumn or forepart of winter, when the stones may be loaded on to a boat or ox-sleds, and drawn to any place where they may be wanted.

Large quantities are laid up into massive walls, from 3 to 7 or 8 feet thick, and 5 to 7 feet high. The fences on this farm are already built for generations to come, with but trifling expense in occasional repairs. Hundreds of tons of these stones have been buried in ditches in the bog meadow and on the wet lands, for the purpose of draining.

MANUFACTURE OF MANURE.—It will be readily conceived that a farmer of Mr. Phinney's skill employs every means the farm affords for making manure, the necessity and value of an abundant supply of which, to successful and profitable farming, he fully appreciates.

A stock of 60 to 70 head of cattle is stabled most of the time, night and day, in the winter, and the manure is thrown into cellars underneath, the bottoms of which are covered with peat mud, 2 or 3 feet deep, in order fully to absorb all the liquids from the manure. The floor upon which the cattle stand, is 4 or 5 inches higher than the passage behind, and the planks are just long enough for them to stand or lie down comfortably, which keeps them perfectly clean. Immediately behind them, is a trench, some 12 to 16 inches wide, and the thickness of a plank lower than the passage way, which, except in the very coldest weather, is filled with peat daily, in order to absorb the urine; and this and the solid excrements go into the cellar together, by which arrangement the compost is most perfectly intermingled.

The cellars at the time of my visit, were full to overflowing, and the workmen had commenced carting out their contents. While doing this, more peat-mud is added if thought advisable; the intention being to use two parts of this material to one of manure. The compost is laid up in square, compact heaps, well covered with peat or loam, and mostly used when a year old; it being deemed of importance that the gases shall be fully developed and absorbed by the peat before it is applied to the soil, whereby all evaporation or waste is prevented.

The pasturage is deficient for this large stock of cattle, the whole farm containing but 160 acres; and it is therefore necessary to feed them through the summer, mostly in the barn, and for this purpose, clover, corn, early rye, &c., are sown, to cut and feed green. The cattle have, however, a small pasture to range upon a few hours daily for exercise. The manure heap is increased greatly by this summer feeding, peat-mud being thrown into the trenches freely, every day.

Mr. Phinney had the misfortune to loose his house and extensive piggery last summer by fire, and he is not doing much just now in the way of breeding and rearing hogs. After the new house is finished, he will put up a new piggery, and resume this important department of his farming. He feels out of his element about these days, from being deprived of the valuable assistance, formerly rendered so cheerfully, by his friends the excellent Mackays and Suffolks, in manufacturing compost at the rate of eight to ten loads each, annually. As it is however, a stranger walking over the farm, wonders what is to be done with all that manure, as he encounters at every turn a huge pile of it. About a thousand loads are made annually on the farm, besides an occasional purchase in Boston, as for instance: 15 or 20 tons of refuse salt fish—of which he showed me a bill just received—which is mixed through the heaps. There are some thirty acres under the plow, annually, upon which this amount of manure is spread.

Field Cultivation.—The soil of this farm was, originally, a thin loam, resting upon a hard, gravelly subsoil. Mr. Phinney early became convinced of the importance of securing and preserving the vegetable matter of the inverted sod, in order to supply, as speedily as possible, that which was most wanting in his soil—vegetable substance. It was the universal practice among farmers, when he commenced, to plow, cross-plow and harrow their sod-lands, thus exposing the vegetable matter of the turf to the dissipating influence of sun and wind, and almost entirely losing its value. By this means a great part of the object of plowing was entirely subverted—what was the surface before plowing was brought to the surface again, and the lower stratum, which should, by one careful plowing, have been left on the surface to undergo the ameliorating and fertilizing action of the atmosphere, was returned to its lifeless and unfertile bed, receiving little or no benefit by the operation. Believing this to be an error in practice, he instituted an accurate experiment to ascertain the amount of purely vegetable matter in an acre of sward-land, of very moderate fertility. This experiment, although made some twenty years ago, is still possessed of so much interest, and detailed with so much accuracy. and is, withal, so perfect a specimen of what the details of farming, for the press, should be, that I give below his own account of it:—

"In May, 1829, the field having laid three years to grass, and the crop of hay so light as to be worth not more than the expense of making, with a view of ascertaining the quantity of vegetable matter upon the surface, I took a single foot square of green sward, and after separating the roots and tops of the grasses from the loam and vegetable mould, it was found, on weighing, to contain nine ounces of clear vegetable substance, giving, at that rate, over twelve and a quarter tons to the acre. This convinced me of the importance of taking some course by which this valuable treasure might be turned to good account. That a great part of this mass of vegetable matter is exposed to useless waste, by the usual mode of plowing, cross-plowing, and harrowing, must be obvious to any one. In order, therefore, to secure this, as well as the light vegetable mould at and near the surface, which is liable to waste from the same causes, I had two acres of the green-sward of this field turned over with the plow as smoothly as possible. After removing the out-side furrow slices into the centre of the plow-land, and thereby effecting the double purpose of covering the vacant space in the middle, and preventing ridges at the sides and ends, the field was rolled hard, with a loaded roller, by which the uneven parts of the furrow were pressed down and the whole made smooth. It was then harrowed lengthwise the furrows, with a horse harrow, but so lightly as not to disturb the sod. Twenty cart loads of compost manure, made by mixing two parts of peat-mud, with one of stable dung, were then spread on each acre. It was then harrowed again, as before, and the poorer part of the soil, which had been turned up, and remained upon the surface, was thereby mixed with the compost manure. Corn was then planted in drills upon the furrow, the rows being at the usual distance, and parallel with the furrows. At hoeing time the surface was stirred by running a light plow between the rows, but not so deep, at this or the subsequent hoeing, as to disturb the sod. What Mr. Lorain calls the 'savage practice' of hilling up the corn, was cautiously avoided.

"As the season advanced, I carefully watched the progress of my corn-field. In the early part of the season it did not exhibit a very promising appearance; but as soon as the roots had extended into the enriching matter beneath, and began to expand in the decomposing sward, which had now become mellow, and more minutely divided by the fermentation of the confined vegetable substances beneath, than it possibly could have been by plow or hoe, the growth became vigorous, and the crop, in the opinion of those who examined the field, not less than seventy bushels of corn to the acre. As soon as the corn was harvested, the stubble was loosened up by running a light horse plow lengthwise, through the rows, the surface then smoothed with a bush-harrow, and one bushel of rye, with a sufficient quantity of herd's-grass and red-top seed, to the acre, was then sowed, the ground again harrowed and rolled. The crop of rye was harvested in July following, and the two acres yielded sixty-nine and a half bushels of excellent grain, and over five tons of straw. The grass seed, sowed with the rye, took well, and the present season I mowed, what those who secured the crop, judged to be two and a half tons of the very best of hay from each acre.

"Thus, with one plowing, with the aid of twenty cart-loads of compost manure to the acre, I have obtained two crops of grain, and stocked the land down to grass."

Ever since that experiment, it has been his invariable practice to plow but once during a rotation of crops. The turf is carefully inverted and there remains, through the whole rotation; the subsoil, or what was before the lower stratum, remaining on top, is ameliorated and enriched by the action of the atmosphere, and the compost spread upon it. The poorer soil below has been gradually brought up, by deepening the furrow an inch or two at each sod-plowing, and I noticed that now, especially on fields that have been for several years under his liberal hand, the soil is deep and rich.

My attention was directed to a field of 12 acres, which he took in hand a few years since, an old orchard, which had been in grass for a long time, the soil thin, and the field covered with stone-heaps. These were removed, the field plowed about six inches deep, and the stones brought to the surface in the operation, picked up and carted off; thirty loads of compost to the acre were then spread on top and harrowed in, and the field planted to corn. The crop averaged between seventy and eighty bushels per acre, and the next spring the surface was loosened and leveled with the harrow; a compost of 6 bushels of lime to 3 loads, or 1½ cord, of peat-mud was spread, 12 loads per acre, and the field sowed to wheat. The yield averaged 20 bushels to the acre, of fine quality. At the same time it was stocked to grass with ½ bushel herd's-grass, 1 bushel red-top, and 10 lbs. clover seed, per acre. The seed took well, and the next year the job of making and securing the hay was let out, and judged by those to whom it was referred, to be 40 tons, when in the barn. The grass crop has been heavy on this lot for 5 or 6 years since.

This liberal use of grass-seeds has several advantages to recommend it to a more general practice among farmers. The soil is completely filled with the kind of vegetation wanted; and hence the quality of the hay is much finer, and rendered free from foul stuff, and a thicker and more valuable turf supplied with which to enrich the ground, when again broken up. I particularly noticed that the grass grounds on this farm were remarkably free from those vacant spots, and those large tufts of grass, which are so frequently seen on land seeded to grass by the hand of parsimony. The quality of the hay in the barn, also attracted my notice, as being excellent. If the poor soil and thinly set sward of 1829, had 12¾ tons of vegetable substance to the acre, the same field, in its present improved condition, probably has a sward containing 20 to 25 tons of this material, per acre—which, turned under for the support of the growing crops of the next rotation, is an item of no small importance.

We see, in connection with the foregoing remarks on Field Cultivation, why it is that farmers who have mainly to do with worn and hungry soils, of a sandy or gravelly nature, insist so strenuously upon the great value of a compost of two parts of peat-mud or swamp-muck, to one of stable-dung; considering it equal in its effects, load for load, to animal manure alone, in a rotation of crops. The fact is, that light, thin, sandy and gravelly soils, are particularly wanting in vegetable substance; and their nature is also such, that it is impossible any way can be fixed, to apply clear unfermented dung, without its being liable to great waste from the powerful operation of the sun's rays in evaporating the volatile portions of the manure, through the coarse, loose and open pores of the soil. But in resorting to the muck-hole, these farmers find the very material for the basis of the manure-heap, which their soils need, and by using it freely in compost with the manure of farm-stock, they are enabled to supply speedily and in large quantities, this vegetable substance. The compost being fully ripened, the gases all developed and absorbed by the muck, in the form of salts, we have a mass of vegetable matter to apply to these hungry soils, not so liable to the objection of loss by evaporation.

The skilful farmer also finds that his sandy or gravelly soil is generally too shallow, and he wishes to remedy the defect. He therefore, like Mr. Phinney, plows a little deeper at each breaking up, and the poor and lifeless soil, brought to the surface, is mixed thoroughly with the compost-dressing, and this, together with the action of the atmosphere, enriches and improves it. The vegetable matter of the sward is buried underneath, and thus a deep and fertile bed is formed, upon which the growing crops of the rotation may expand, and find nourishment to mature into a bountiful harvest.

The texture of these soils, as I have before said, is too loose and open, and this defect is greatly obviated by a few years tillage with the use of this compost; rendering the soil thereby more close and compact. In my opinion, such soils should always be manured with compost in some form. If the farmer has not muck at command, he may use clay, or a fine-grained, compact loam in its place, to excellent advantage: as by this means the texture of the soil is improved, and made more retentive both of moisture and manure. In short, it may truly be said, that there is no system of manuring, in field cultivation, of such *permanent* utility as a judicious mixture of soils.

I am not much given to *theory*, Messrs. Editors, although in the three paragrphs above I have indulged in it somewhat. You will please take it for what it is worth, and no more. The *practice* noticed in these remarks I believe to be correct, however wild the *theory* may appear.

In my next communication, I propose to notice:—

1st. Draining and reclaiming swamps and wet land.
2d. The fine orchards and their cultivation.
3d. Breeding and fattening swine.
4th. The imported stock of the "Massachusetts Society for promoting Agriculture," which is kept on this farm, and their treatment; with some reflections upon the subject.

F. Holbrook.

Brattleboro, Vt., Jan. 28, 1848.

Lands on the Canada Line.—Ex-Governor Hill, of New Hampshire, speaking of a trip he made along the Canada line, between Lower Canada and Vermont and New Hampshire, thus expresses himself:—"I was surprised at the extent and value of this whole country for farming purposes. I believe the belt of country for 100 miles south of 45th degree, and eastward of Lake Champlain, over Vermont and New Hampshire, through the whole extent of Maine to the Bay of Fundy and the sea, to be the most valuable tract of land in New England. The Canada townships, of ten miles square, farther north, are splendid. Stanstead may be taken as a sample. The best township of Vermont is said to be Derby, lying by the side of it. The cattle, and all the productions of these two towns are on a larger scale than we find down south."

Improvement of Land in Barnstable.—Charles Sears, of Yarmouth, paid in 1832, for his thirty acre farm, $350, then thought to be its full value. Its total product then, was pasturage for two cows, and 25 bushels grain. Now he pastures three cows, gets 10 tons of good hay, 200 bushels of grain, 100 bushels potatoes, &c. He has a cornfield of 4 acres, yielding 40 bushels per acre. Most is sand, a small part sand and peat—on a part of the latter, reclaimed, he cut the past season at the first mowing, at the rate of 4 tons of hay per acre.

SCOTCH AND AMERICAN PLOWS.

Eds. Cultivator—The annexed remarks were written some time since, but were not thought by me of sufficient general interest to publish. Possibly you may judge otherwise. As a practical comment, it may be well to mention that I had a quarter of an acre plowed at our last cattle show, with the plow in question. The work was well done, within the hour, about an inch deeper, and an inch or two narrower than the requisition. The plowman, however, received no premium, which I took to be an indication that the ribbed and angular furrows did not please our farmers as well as the flatter and smoother appearance of the work done by our Worcester and other plows. W.

Lenox, February 14, 1848.

Many of your readers will have been struck with the extreme beauty and apparent completeness of the Scotch plow, as accurately delineated in "Stephen's Book of the Farm;" moreover they may have read such statements in regard to the perfection of English plowing as those made by Mr. Colman, who says, speaking of an English plowing match—" I do not misstate when I say, that I do not believe there was a variation of an inch in the whole field, in the width or depth of the furrow, or a single crooked line, or even one solitary balk;" and it may be interesting to them to know of some practical use of these celebrated plows in this country. No doubt there may be many of them in the country, but I have never seen any save one imported by me, nor have I seen any good account of them in our agricultural journals. I will, therefore, proceed to relate my own experience, and speak of its comparative advantages and disadvantages with reference to our American plows.

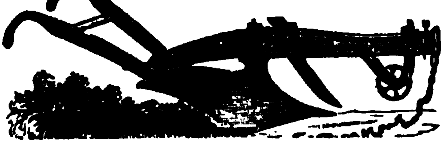


Fig. 30.—*American Plow.*

The accompanying sketches have been made in order to give, at a glance, the comparative proportions and size of each kind of plow. Fig. 30 being the usual form of the American plow as made by the best makers; fig. 31, the Scotch Iron plow; fig. 32, the Scotch plow, showing the underside, or portion that runs on the bottom of the furrow; and fig. 33, the corresponding portion of the American plow.

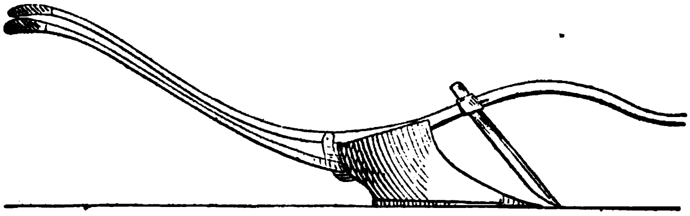


Fig. 31.—*Scotch Plow.*

It will be seen at once that these plows are constructed and must work on different principles; and before speaking of the action of the two instruments, allow me to show, in a few words, what are the principal points of difference.

1. The Iron plow is longer in every part, but chiefly in the handles, which are more than five feet, *horizontal measure*, in length from the mould board, whilst our plows are only about eighteen inches. The beam, on the contrary, is but little longer than ours. The landside, from heel to point, is about six inches longer, and the mould board to the extremity of the ear is also longer and more twisted.

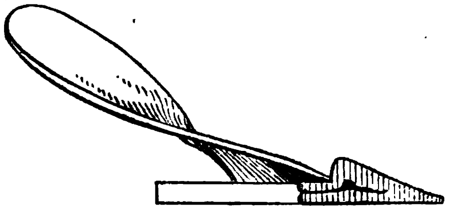


Fig. 32.—*Underside of Scotch Plow.*

2. The wing of the share, which is usually 10 inches wide in the American plow, is not over 6 inches in the Iron one. Consequently the latter does not cut the furrow much more than half off on the underside; but on the other hand it encounters fewer obstacles likely to disturb its motion, and avoids the friction occasioned by the cutting edge, both against itself, and against the landside.

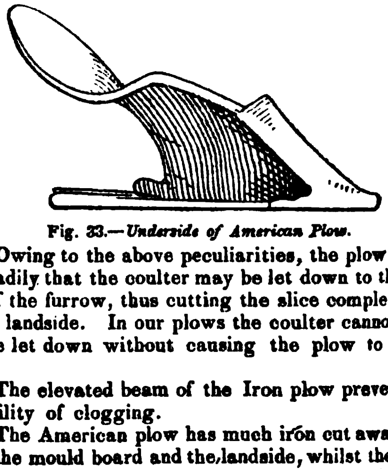


Fig. 33.—*Underside of American Plow.*

3. Owing to the above peculiarities, the plow moves so steadily that the coulter may be let down to the bottom of the furrow, thus cutting the slice completely off on the landside. In our plows the coulter cannot usually be let down without causing the plow to throw out.

4. The elevated beam of the Iron plow prevents all possibility of clogging.

5. The American plow has much iron cut away both from the mould board and the landside, whilst the other is whole on both sides. I believe the lessened weight is made up for in the increased friction where we plow over five inches.

6. The Iron plow rests all its weight on a shoe, say eighteen inches long by two and a half wide—the bottom of the mould-board does not touch the bottom of the furrow. In our plows the weight rests equally on the mould board and landside.

In a word, in the American plow the reversion is effected by causing the furrow slice to pass over the smallest possible surface of iron; and by keeping this in view the extreme of lightness is attained, sufficient strength, and the complete reversion of the furrow is effected. The plow weighing perhaps one-third of the iron plow, turns the same breadth and depth of furrow with a lighter team. But these admissions being made, and they are large ones, the palm of perfect work in every respect must be conceded to the admirable instrument we are considering. By its tapering form it enters the ground with ease, and moves with perfect steadiness, taking no notice of obstacles that would throw our short plow out of the ground. Its long and twisted mould-board raises the slice, pulverizes it completely, and leaves it in its place with absolute regularity. The plowman, by means of its long handles, makes it move easily in a perfectly straight line, and the "work when done, resembles a ruffle just come from a crimping iron," as Mr. Colman describes it.

Taking for granted a superiority which two years trial has convinced me of, the question arises in what cases can an American farmer be justified in meeting the expense of first cost, say $20a$25, and of the additional force required to move it. For although two horses are in all cases sufficient, yet in a tough sward they must be much more powerful animals than our farmers usually employ. I should say then, that where the common system prevails, of going through a rotation of corn and potatoes, grain and grass, with only two plowings, and those only 4a5 inches deep, our farmers have, in the common plows, as efficacious an instrument as can be contrived. But on the contrary, whenever an improved agriculture is introduced, roots grown extensively; wherever, in a word, first-rate plowing is required, and thorough tillage, the Scottish plow, or some analogous instrument, must be used.

I have often thought whether some compromise might not be effected, whereby we might combine the perfection of the one with the lightness of the other; but I have not felt satisfied that it can be done. The slender shape of the Scotch plow requires that there should be great strength, and consequently, weight of wrought iron about it. Its parts are already adapted to move with the least possible friction that will effect the object; and although one of our plows does not present more than half as much surface of iron to the furrow slice, it is my belief that if it were loaded with the same weight of the other plow, it would be much heavier of draught.

MANURES—THEIR NATURE AND ACTION.

The subject of Manures, what they are?—what constitute their active principles?—how they act in promoting vegetable growth?—as well as the best mode of preparing and multiplying them, is one that has been frequently discussed—filled many pages in our agricultural journals—and occupied the attention of some of the strongest minds devoted to the study of agricultural science. These facts we may adduce as evidence that the right understanding of this subject is *regarded* as the foundation of all correct and profitable farming. Not only is this remark true when applied to our day—it was so two thousand years ago. We learn from Pliny that the Roman farmers decreed immortality to Sterculius for inventing manures, while they themselves devoted much of their attention to their preparation. To this end, the *mineral* as well as the animal and vegetable kingdom were called into requisition. The directions left on record for preparing their compost heap, selecting a shallow basin, and advising to cover the top, when completed, with *twigs and branches of trees with their foilage*, convince us that they were aware the *sun* and the rain would dissipate their active principles. The value they placed upon human ordure, and the liquid excrements of animals, the use of fish and other substances as manures, satisfies us that they possessed much of the practical skill for which the Belgians of the present day have been so justly celebrated.

When I commenced farming operations, I had given but little attention to the subject of manures, and regarded it as of comparatively little moment; but as I progressed, it has risen in importance, until it is with me the absorbing subject about which, although I have learned many things, I am more anxious to receive instruction than on any other topic connected with farming.

Manures may be said to be the elements of fertility, containing both the inorganic salts, and the organic elements of vegetable growth. In common language, they are the *food of plants*. How plants take up and digest this food—first requiring it to be dissolved in water, that by their open mouths at the termination of their roots they may drink it in—then conveying it in appropriate channels up through the trunk and branches, to be elaborated in the leaf, where it appropriates to itself the elements that enter into its structure, and give out to the atmosphere such as are not essential to its growth—is the interesting study of the vegetable physiologist. On this department of the vegetable kingdom it is not our purpose at present to remark—but rather to inquire what are the elementary substances that contribute most to the growth and fertility of plants? With these, we must not fail to be familiar, if we would be wise in the adaptation of means to the end, by which only can we expect success in this interesting department of human labor.

Chemistry teaches us that four elementary principles enter into vegetable structure, and hence are termed *organic* substances—they are *Carbon*, *Hydrogen*, *Oxygen*, and *Nitrogen*. The first three are furnished by the atmosphere in sufficient quantity to meet the demand of the growing plant—the remaining elementary principle, *Nitrogen*, that enters into every part of the vegetable structure, and hence may be regarded as essential to vegetable as it is to animal life; while it exists in the atmosphere, is not furnished in sufficient quantity for the perfection of vegetable growth. And if we would obtain vegetable products rich in nitrogenized principles, we must surround the growing plant with animal or vegetable manures containing an additional amount of these principles. In illustration of this position, we find wild plants to contain less of nitrogenized principles than cultivated ones—and as the value of all vegetable food for animals depends on the amount of these protein compounds, wild plants are decidedly less nutricious.

It would seem, then, that one of the great problems for the agriculturist to solve, is how to furnish plants with the requisite supply of Nitrogen with the least expense? And the question, too, for the skilful farmer is to learn in what substances he can find the most nitrogen, and how he can preserve it in the volatile form in which we find it in nature, to apply to the soil. The great number of substances used as manures would seem to render this subject extensive and complex.

In the suggestions I have to make, I shall endeavor to show that the amount of nutriment which each manure can furnish to the support of vegetable life, will be in exact ratio to the nitrogen which it contains,—in other words, that manures are valuable to the farmer in proportion to the nitrogen which they contain, or have the power of forming nitrates.

It has long been known by our practical farmers, that our most common manures possessed very different fertilizing properties, viz: the *Cow*, *Horse* and *Hog* manure, and human excrements. On what does this difference depend? We learn from chemical analysis, that the quantity of *salts* which they contain is very nearly the same in all, hence the inference is legitimate, that it does not depend on the salts—for if the salts were the source of their fertilizing properties, they would, contrary to the experience of practical men, be of equal value to the agriculturist. And so of the humic acid, or genine—for that is of equal quality in the horse and human excrements; but not so with the nitrogen, which exists in very different proportions.

The experiments made by the Prussian authorities, to ascertain whether the contents of the sewers, in the cities of Berlin and Dresden, could be applied with profit to the barren lands in their vicinities, are replete with instruction. Those experiments were made and continued through a series of years. The result satisfactorily demonstrated, that if a soil in its natural condition, without manure, would yield a crop of three to one, for the seed sown, it would with cow dung yield *seven*, with horse dung *ten*, and with human excrement *fourteen*. While analysis shows that this, their relative value, is just the relative proportion of nitrogen. Here then is science harmonizing with the experience of the practical farmer. While we can find science in the laboratory of the chemist, confirming, while it explains the experience of the practical husbandman, we are strengthened in following on in the pathway she would lead us. When science goes farther, and sheds her light where all before was darkness, we are rejoiced to follow reverently, if not confidingly, her teachings; but when those teachings conflict with what experience has demonstrated to be true, we should interrogate her farther before we venture to proceed.

Professor Johnston has told us, that the influence of ammonia on vegetation appears to be of a very powerful kind—it seems not only to promote the rapidity and luxuriance of vegetation, but to exert a powerful control over the functions of vegetable life. And again he says, the important influence which ammonia exercises over the growth of plants, is only to be explained on the supposition that numerous transformations of organic substances are effected in the interior of living vegetables, or a re-arrangement of the elements of which ammonia consists. Ammonia is a compound of *hydrogen* and *nitrogen*—and out of every 100 parts by weight of *ammonia*, we have 82½ of nitrogen. Ammonia is the form in which nitrogen is found in our manures, and is evolved as the product of the decomposition of animal and vegetable substances. If, then, this principle is the agent upon which fertility in the vegetable world mainly depends, as I have endeavored to show, we have a scale by which we may measure the relative value of manures, and by which our rules may be formed for the construction of our compost heaps, that will enable us to secure, with the least diminution, their active principles. Our senses will always discover to us the substances containing nitrogen from the tendency that characterises them to run into a state of putrefaction, and in the process of putrefaction to form alkalies; while other manures decay, without putrefying, and form acids instead of alkalies.

In the list of substances, valuable as manures, arranged according to their relative value, taking such a scale for our guide, we place first on the list those substances that have received the least care, and have been regarded by the generality of farmers as of the least practical value—I refer to the liquid excrement of *man* and *animals*.

In the composition of human urine, there does not enter a single salt which is not essentially an ingredient in all plants; its fertilizing property is found in the fact, that almost all the nitrogen that makes its escape from the body, makes its exit through the urine That amount, in a full grown man or animal, is equal to the amount of nitrogen contained in the food on which the body is daily fed—and as nitrogen is the only substance that forms *muscle*, and meets the daily muscular expenditure of every working man and animal, (unless there be other sources of assimilation than those now known to physiologists,) that amount is not inconsiderable. The urine of the horse is but little less valuable than that of man—and that of the cow but little less than the horse. When we consider with what ease these may be saved by means of absorbing substances, that are within the reach of every farmer, how can we justify their shameful waste? Repeated trials of their use, have abundantly satisfied me, that the increased growth of the crop to which they have been applied, has abundantly compensated for the little labor bestowed in their collection.

Next on the scale, according to their relative value, we have the excrements of our domestic fowls. Since their food consists mainly of nitrogenized substances, and as we have in all the feathered tribe, the liquid and solid excrement combined, we may readily understand why to the prudent farmer, the poultry-yard renders such efficient aid in increasing his resources. Analogous in its composition and value is guano—the excrement of the sea fowl. To those in the interior of the country, that have not at their command this rich fertilizer, an admirable substitute is found in the dung of the domestic fowl. In confirmation of the position that it is the nitrogen that contributes more than any of the salts to the value of *guano*, we may remark, that analysis gives us in the best article from 8 to 9 per cent. of nitrogen, while in those that have disappointed the agriculturist in their use, not more than 1¼ per cent. has been found.

Next follow *blood*, and animal matter—the carcases of our domestic animals—as horses, cows, hogs, sheep, dogs, and fish; with their coverings—the hides, hair, wool, feathers, hoofs, horns, and nails, &c. Substances rich in nitrogen should be made to impart to beds of peat and loam, the ammonia that escapes during putrefaction, instead of "wasting their sweetness on the desert air." And when they have done this, the wise farmer will see to it, that the bones that have constituted the frame work of the animals, be restored in some form to the soil, and thus be made to give back to it the phosphates that have been abstracted by the successive crops that it has yielded.

Next follow the droppings of the domestic animals. The resources of the farmer will be much increased by composting the *horse* and yard manure with peat, with which the careful farmer will see that his yard is well supplied. By this process, not only are the gases which are evolved during fermentation secured by the peat, as an absorbent, but the mineral substances, and salts which it contains, locked up as they are by superabounding acids, are set free, and neutral salts are formed, by which the peat itself becomes almost as valuable to the farmer as the dung itself with which it is composted.

Science and experience harmonize in their testimony that when compost heaps are made under sheds, their active principles are more certainly secured, being saved from the wasting process of leaching under rains on the one hand, and evaporation under exposure to the burning sun on the other.

Protection from the rains would seem to be necessary from the fact, that whatever there is in manure that contributes to vegetable growth, must be soluble in water, for plants take it up in no other condition than that of solution. And on the other hand, if there is a large quantity of vegetable matter in a dry state, to be composted, experience has taught us, it should be combined in some way with the liquid excrement of the animal, or else thrown into a compost heap immediately after a rain, when it is saturated with water. For such a requirement science furnishes us the following solution:—Ammonia, being a compound of *hydrogen* and nitrogen, water must be present in sufficient quantity to furnish the *hydrogen* to unite with the nitrogen, or instead of ammonia, we shall have cyanogen formed, which is also a compound of hydrogen and nitrogen; but the hydrogen is in a smaller quantity than what is requisite to form ammonia.

Among the artificial manures, peat may be used with great benefit, either alone, if exposed for a length of time to the ameliorating influences of the frost, rain, or atmosphere, or combined with the mineral manures, lime, pot-ash, or ashes. To the potato crop it may be used uncombined with mineral manures, not only to the increase of the quantity, but manifestly to the improvement of the quality—the abundant humus which it yields, contributing to increase the starch, upon which the mealiness of the potato, that we so much prize, depends.

The most satisfactory explanation of the action of gypsum as a manure, is that given us by Liebig—that it fixes the *ammonia* of the atmosphere for the benefit of the growing plant.

Charcoal, considered in itself, is one of the most indestructible substances—remaining unchanged, and apparently unchangeable in its form, for many years; and yet, from the increased fertility of the soil to which it has been applied, remaining long after the action of all other manures with which we are acquainted has ceased, and all traces of them has disappeared, it evidently possesses an influence on vegetable life as yet *unexplained*, unless it be its power of absorbing ammonia, and *holding* it in readiness to be given up to the *growing plant*, at every successive rain.

The importance which we thus attach to the influence and value of nitrogen in promoting vegetable growth, may, at the first glance, seem to war with the doctrine of special manures, as well as with the fact that a number of elementary inorganic substances, must always be present in the soil in sensible quantities; the absence of either one of which, without a doubt, will seriously affect vegetable growth. Such impression would seem to find support in the fact, that where in a particular field or section of country, from the growing of one crop a succession of years, instead of a system of rotation of crops, there has been an abstraction of one of these elements, the use of some manure containing a large quantity of that particular substance, will restore at once fertility to the sóil, as was the case with the *grass* lands in *Cheshire*, in which the phosphates having been exhausted, *bone dust* proved more valuable than any other manure, and so of lime in other sections.

In such cases the action of the specific ingredient is only salutary, because in its use there is a restoration of a lacking element—the increased use of which instead of being salutary, often proves prejudicial to the interest of the farmer. To this fact we owe the expression, almost grown into a proverb, that lime, "while it enriches the father, impoverishes the son." Not so with nitrogen, or its compound ammonia—the more liberal its use, the greater the yield, and the better the tilth the soil acquires. The admission of the necessity for the presence of all the elementary inorganic substances in the soil, does not, in our judgment, at all invalidate the position which we have endeavored to sustain, that the value of manures in common use, may be measured by the quantity of nitrogen which they contain, or their power of forming nitrates.

Albany, March, 1848. J. M. Ward.

Facts and Opinions,

CONDENSED FROM BOOKS AND PAPERS.

Use of Clay on Sandy Soils—two Crops on the same Land at once.—The report of the committee on farms for the Hartford County Ag. Society, states that Mr. George Olmstead, of East Hartford, has greatly improved a piece of sandy land, which formerly produced very scanty crops, by mixing with it earth of a clayey nature. He is confident it has well paid him for the expense. The same report states that Mr. Olmstead has practiced cultivating two crops on the same ground at the same time, with advantage:—He plants, on early soil, potatoes in rows four feet apart; and after hoeing two or three times, he plants an early variety of corn between the rows. He believes that by this mode his ground yields him a much greater profit than when planted with but one crop.

Under-draining.—B. F. Jewett, near Utica, lays two scantlings in the bottom of his ditches, 5 or 6 inches apart, and covers them with a slab. In quicksand, a slab should also be laid on the bottom. The ditch is then filled with earth.

Browse for Sheep.—Hemlock, pine, and spruce, are found good for sheep. In new or wooded countries, much hay may be saved by the use of browse; and its succulence be useful and wholesome.

To destroy Sorrel.—Manure well early; plow deep early; harrow well; plant corn 3 or 4 feet each way; pass the cultivator through every ten days, till the middle of summer; then sow 12 lbs. of clover seed per acre, and pass the cultivator again. Clover will take the place of the sorrel.

Use of Railroads to Farmers.—Three thousand six hundred gallons of milk, daily average, were taken over the Fitchburgh railroad to the Boston market, the past season. In consequence of the increase of this business, a special milk train is to be run every night, after the commencement of the coming season.

Sheep killed by Dogs.—N. Sawyer writes in the Ohio Cultivator, that over 300 sheep have been killed by dogs on his farm since March last. More or less are killed every week. They are caught by the throat, a hole is torn into the side, and a part of the ham eaten off. The dogs never again return to the same sheep, but attack fresh ones. A part of the sheep on this farm are of great excellence and value, and have been brought over 1,000 miles. Is not the great State of Ohio, with its government, strong enough to protect the property of its citizens from such losses?

Rapid Growth.—It is stated in the Germantown (Ohio) Gazette, that there is, near that place, a willow tree, only about 20 years old, which is 10½ feet in circumference, (3 feet 4 inches in diameter) 64 feet high, and 64 feet broad.

Ohio Swine.—The Ohio Cultivator gives the number of hogs in each county in the State, according to census, for 1846 and 1847. In every one of the 83 counties, the number has increased, except in two, viz: Champaign and Lawrence. In 1846, there were 1,405,621. In 1847, there were 1,751,318.

Prices of Farms.—The Village Record, published at West Chester, Pa., gives a statement of the sale of 13 farms in that vicinity; by which it appears that the prices varied from $33 to $87 per acre, and that the average price for the whole was about $58 per acre.

Cob Stove Wood.—P. Parks, of Victor, N. Y., states an interesting experiment in using cobs for fuel. Half his last year's fuel was cobs, from a few acres of corn. They burn quickly, and make a hot fire; an air-tight stove is best. A light tin shovel must be provided. Their ashes would doubtless be good for next crop.

WOOL-GROWING IN ILLINOIS.

EDITORS OF THE CULTIVATOR—The extensive circulation of your well known paper, induces me, a western man, to offer a communication which I hope will contain information of some value to those wool-growers in the east who may think of emigrating to the west, with a view of following the same occupation to greater advantage.

The great extent of the west, its various climates, the different age of its innumerable settlements, the presence of destructive animals, and their extermination at certain points, are all circumstances that may favorably or unfavorably influence the efforts of the new settler. The descriptions of new countries are, for the most part, of too general a nature. They speak of the salubrity of the climate, the fertility of the soil, woods, prairies and rivers, and the whole is but an outline of a grand picture. There is a great want in these communications of that precise information required by men of business. Many emigrants have been disappointed for want of accurate information of the circumstances of the country, as bearing on their particular occupation. The failures frequently complained of, need not have occurred had the emigrants adapted themselves to the proper localities. To wool-growers, a correct knowledge of the very spot to which they intend removing, is all important, and absolutely necessary to secure them from many risks. But experience alone can point them out.

I have resided in this immediate neighborhood for twenty-nine years, and during the whole of that time have been a flock-master, owning from three hundred to eight hundred sheep. For twenty-five years of that time the great drawback to the pleasure and the profit of sheep-keeping, was the presence of the wolf. The injury did not only incur from the numbers of the animals destroyed, and they were very great; but from the necessity of keeping the sheep safely penned at night, summer as well as winter. This practice was highly injurious to the condition of sheep and lambs, as well as to the growth of wool and weight of fleece. But so long as the wolf existed in the country, there was no remedy. The wolf has left this part of the country for the past three years. The first year it was conjectural, for no one dared to leave his flock abroad. But for the last three years my flock, and other smaller flocks, have laid out safely in the prairie range from April to November, night and day. This circumstance forms a new era in sheep husbandry here, and opens a new field for capital and enterprise in that branch of business. Those who are conversant with sheep will allow, that every sheep suffered to repose in its own pasture, night and day, will pay its owner half a dollar a head more than one that is penned at night, especially where summers are long and warm as they are here.

The part of the country of which I am speaking, is in Edwards County, Illinois, a little south of Albion, the county town, in latitude 39. The easiest route to it from the east, is to descend the Ohio to Mt. Vernon, Indiana, thence to Harmony, 16 miles—from Harmony to Albion, 20 If Wabash boats are running, a passage may be taken at Cincinnati on one of them as far as Grayville on the Wabash, which is ten miles from Albion. The prairies of which I speak, lie between the Great and Little Wabash—10 miles from each, at an elevation of *one hundred and sixty* feet from both. Drained by these two rivers, the prairies between them are *rolling, high, and dry*. The soil is fertile, and takes grass well. The winters are short, and generally mild. Where there is an abundance of tame grass, sheep will get their living without much fodder, all through the winter. The cold weather that occasionally occurs in December, January and February, comes in short paroxysms, with long spells of intervening mild weather. Snow seldom lies more than three or four days together. A fall of six inches is a deep snow with us. Shelter is quite necessary for all domestic animals; for they, like man, feel more sensibly the cold spells of weather in our mild winters, than those inured to the severe and steady cold of a more northern winter.

The improvements made by the emigrant will be of a permanent or temporary nature, according to his capital and ultimate views. A shed with clap-board roof and faggot back, is all that is necessary for the sheep. A house of any description may be erected, from a snug log cabin to a mansion of brick, frame or stone. Abundance of materials being at hand, and workmen ready to erect them. The price of land is quite moderate. Choice situations for sheep-keeping may be found at from four to six dollars per acre. By choice situations, I mean those elevated and rolling situations in the clear prairie, that require no previous expenses but the fencing, to their immediate cultivation. A few grubs and hazel bushels, entail an expense of five dollars per acre, and heavy timber ten. The prairies are of moderate size, bounded by woodlands, and interspersed with clumps of full grown oaks, affording an agreeable shade to sheep and cattle, which is essential to their comfort and condition during the summer months.

The facilities we have of steamboat navigation, allow us to deliver our wool into any eastern manufactory at an expense not exceeding two and a half cents per pound.

Nothing can exceed the beauty of the park scenery of this country, its fertility, and generally inviting aspect. Neither must the emigrant think that he is leaving civilization and the comforts of life by coming here. The artificers of iron and wood are numerous and skilful in our small towns, making every tool and implement that the farmer needs. Well stocked stores supply our household wants. Churches and schools are well established. The whole United States cannot show a more peaceable, industrious, and contented population.

In the neighboring State of Indiana, common sheep may be bought for 75 cents or $1 per head. In this vicinity superior sheep of the finest wool, are from five to twenty dollars individually. But the chief object of this extended communication, was to give notice to my brother shepherds of the *absence of the Wolf*, a circumstance in itself that may give success, when his presence would assuredly entail a loss, or perhaps inflict a failure.

The astronomer who patiently watches a plane in the heavens for a quarter of a century, records perhaps the disappearance of a well known star, or the discovery of a new one. It is by recording these simple facts that the science of astronomy has so astonishingly and steadily advanced. If farmers would follow this safe example, and give *facts* instead of theories, agriculture would make a more steady advance, and the recorded communications of its journals would be received with greater reliance. GEORGE FLOWER.

Park House, near Albion, Edwards Co., Ill., Jan. 24, 1848.

Diseases of Animals, &c.

Disease in Swine.

I wish to inquire through the Cultivator, in regard to a disease in swine from which I have suffered loss. In September last, I noticed that one of a litter of ten pigs, which had been farrowed in March, (and which were of good size—would weigh from 150 to 200 lbs. each,) was attacked with what is called the thumps or heaves. In about 24 hours it died. In a few days another was attacked, and soon died, and they thus went off, one by one, till I lost nine out of the ten. I kept for my store hogs about a dozen pigs that came in September; and they are going in the same way. They die at the rate of about one a week. They never live more than 24 hours after I discover the first symptoms of the disease. As soon as one appears to be affected, I take it away from the rest. I have given sulphur and everything I could hear of that would be likely to help them, but all to no purpose. Peter S. Hicks, *near Wilmington, Delaware.*

The disease in swine called "thumps," we have no knowledge of, though we may have met with it under some other name. In the 8th volume of the Cultivator, page 32, it is stated that Dr. Shelby, of Tennessee, had used calomel for this disease with some success; but the quantity given, or the manner of administering it, is not given. We invite the suggestions of those who have any knowledge of the disease and its cure.

Hoof-ail, or "Foul in the Foot."

This is a disease which affects the feet of cattle in a *similar manner* to what the feet of sheep are affected *by the "foot-rot."* Some have supposed that the diseases are in fact identical; but attempts have been made to innoculate cattle with the virus from sheep having the foot-rot, which failed; and this has led to the conclusion that the two diseases are confined to the species of animal in which they appear.

Hoof-ail, like foot-rot, though it may originate spontaneously, or from accident, is, when once induced, believed to be contagious, and hence, when an animal is discovered to be affected, it should be kept by itself till the danger of communicating the disease is passed.

The first indication of hoof-ail, is a soreness and lameness in whichever foot is attacked. If no remedy is applied, the disease progresses rapidly—there is more or less swelling immediately above the hoof and about the pastern joint, accompanied frequently by great heat and high inflammation. The hoof soon separates from the skin on the inside, between the claws, and in aggravated cases the hoof sometimes cleaves off. The disease appears to occasion the animal great pain through its whole course.

The first thing to be done towards cure, should be to cleanse the foot thoroughly by washing in strong soap-suds, or a lye of wood-ashes. Examine the inside of the claws, and if there is any appearance of pent-up matter, pare away the hoof so as to admit a free discharge. Apply a solution of blue vitrol wherever the disease is manifested, and this wash may be repeated with advantage once or twice a day, till the disease is evidently subdued. A pledget of tow, saturated with tar, and bound in between the claws, has been found useful in healing the foot after the other applications have been used.

Youatt recommends bleeding in the coronet, (the junction of the hoof with the skin,) where there is much swelling and inflammation. The animal should be kept in a dry place; a comfortable stall or shed is the best situation.

Domestic Economy, Recipes, &c.

Preserving Meat Fresh.

It may be of some benefit to a portion of your patrons to know how a few citizens in this section have managed, this warm changeable winter, to preserve their beef, pork, poultry, and other fresh meat, for some time in good condition.

One successful method has been practiced by placing one *cask* within another, packing straw between the two, on the bottom and around the sides. The meat was frozen, and packed in straw within the inner cask, secured well at the top from air during the warm weather.

Col. Smith, of Bristol, slaughtered a large number of fat weathers, which he designed to market in the carcass; but the warm spell of weather in the month of November, which was so destructive to fresh meat in this region, caused him to boil them up for their tallow only. The next cold turn, he dressed off about 300 of poultry—a sudden change soon after was threatning them with a sweat; but having at hand an abundance of fresh sheep's pelts, he concluded, by way of experiment, to try their virtues upon his fowls, and accordingly spread a layer upon a floor 5 or 6 deep; then after stacking his poultry upon them, covered them well over with the same in so nice a manner as to keep out the warm air through several severe thaws, before he was blessed with snow enough to sleigh them into a northern market, where they in due time arrived in good condition. Had he known previous this method of saving his meat fresh, it would have told him dollars, by thus keeping his fat mutton. S. W. Jewett.

Fine Pickled Cabbage.—An exchange paper gives the following directions for making this excellent and wholesome relish:—Shred red and white cabbage, spread it in layers in a stone jar, with salt over each layer. Put two spoonsful of whole black pepper, and the same quantity of allspice, cloves and cinnamon, in a bag, and scald them in two quarts of vinegar, and pour the vinegar over the cabbage, and cover it tight. Use it two days after.

Pumpkin Butter.—Boil a barrel of sweet cider down one-third, then add gradually two bushels of small cut pieces of pumpkins, stirring all the while, until boiled to about 12 gallons. Just before taking off, add half a pint of ground cinnamon, and such other spices as may be agreeable. Fine, where apples are scarce, and said to be excellent for king or countryman, the latter deserving it best.

Sweet Apple Pudding.—Superb, cheapest, and best, proved by repeated trial: 1 pint scalded milk, ¼ pint Indian meal, teaspoon of salt, an equal bulk or more of sweet apples cut small—baked at least three hours.

Preserving Apples.—"Lock them up in a dry cellar, and hide the key," says a cotemporary.

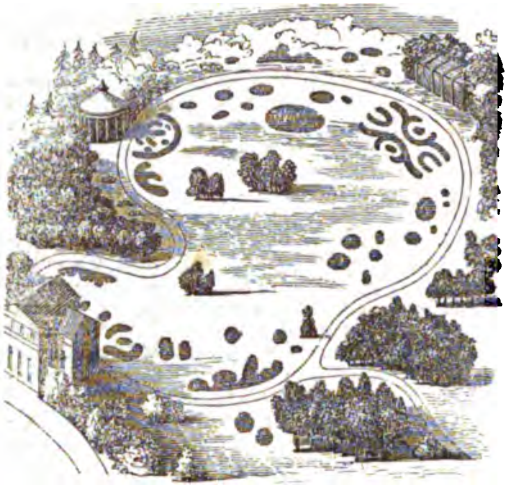
To toast Cheese. *Very fine.* Slice it into a saucepan, with a little butter and cream. Simmer very gently till quite dissolved. Remove it from the fire, let it cool a little, add some yolk of egg, well beaten; make it into cakes, brown it before the fire, and eat warm.

Preserving Hams.—A canvass cover for each ham, well whitewashed, is an infallible protection of hams against flies. They may also be well kept in dry sawdust.

Whitewash for Fences.—One ounce white vitrol, (sulphate of zinc) 3 ounces of common salt, to every 3 or 4 lbs. of good fresh lime, it is said, render it very durable, exposed to the weather.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.



The Shrubbery and Flower Garden.

Nearly all the flower gardens of the country are laid out in geometrical lines; a style, it is true much better adapted to the small piece of ground allotted to flowers, than to the larger landscape garden composed of trees, lawns, and sheets of water. With a wish however, to encourage a more graceful, pleasing, and picturesque mode of laying out even the small flower garden in connexion with the shrubbery, we have given the above plan, which nearly explains itself. It is merely necessary to remark, that the boundary of the grounds is composed chiefly of trees and shrubs, the more central portion being devoted to flowers. The latter is a very smooth and closely shaven green, around which the walk passes, the beds being cut into the turf and raised scarcely above the surface. Most of them are simple circles or ellipses, the shape of which is easily preserved; but a few are of the arabesque, or the more complex geometric form. The latter are only introduced at those points in front of the dwelling, and of the green house (or grape house) at the right, and the circular seat at the left.

The space thus occupied may be from a quarter of an acre to two acres. If laid out and planted with skill, it will present an infinitely more pleasing appearance, and variety of aspect, than the geometric garden. It entirely removes that most disagreeable feeling of constraint, with which one feels his mind fettered, when trying to draw pleasure and beauty from straight lines and stiff curves. But no one should think for a moment of attempting this mode, unless he can mow the surface of the lawn once a week, and keep the walk as smooth and hard as a floor, besides preserving the shrubbery and flower beds in the best order. Less labor, however, is required to keep such a flower garden as this *of a given size,* than one of any other arrangement. Certainly we derive a great deal more of genuine beauty from the work of our hands, by the adoption of this than by the old-fashioned style.

To give proper directions for executing such a plan, to one who has not looked into the subject, would require a greater number of pages than we have already written lines; we must therefore leave this part of the subject, for the purpose chiefly designed at commencement, of giving a short list of some of the best ornamental hardy shrubs and flowering plants, to assist the selection of those who, at the present season, may be about commencing small ornamental plantations; beginning first with shrubs, in the order of their season of flowering:

Early Spring Flowering.

Daphne mezereum (pink mezereon) is covered with a dense profusion of pink-lilac, flowers almost as soon as the frost leaves the ground. Berries poisonous.

Cydonia japonica, Japan quince, is a shrub of slow growth, but when several years old and full of its dazzling red flowers, it presents a mass of great brilliancy, and there is nothing at this season to supply its place.

Amygdalus nana, dwarf double flowering almond, densely covered with pink flowers, resembling masses of miniature roses.

Ribes aureum, Missouri currant, yellow flowers of moderate beauty, but delightfully fragrant.

Shepherdia argentea, Buffalo berry, flowers early, but its chief beauty is the autumn, when loaded with red berries.

Late Spring Flowering.

Ribes sanguineum, scarlet currant, needs some protection in winter—its dense masses of fine red flowers render it very showy. A new double variety, is still finer.

Xylosteum tartaricum, tartarian honeysuckle, flowers varying from white to pink, thickly sprinkled among its small glossy leaves, are unexcelled in beauty. A striped variety is exceedingly delicate and fine.

Philadelphus grandiflorus, with its large clear white flowers, is more showy than *P. coronarius* (syringo) which however excels it in fragrance.

Halesia tetraptera, silver bell tree, handsome pendant white flowers.

Spiræa hypericifolia, flowers white, small, abundant—pretty.

Kerria japonica, Japan globe-flower, flowers double, yellow—often continues flowering till late autumn.

Berberis vulgaris—barberry—yellow flowers in handsome racemes, with showy red berries in autumn.

Calycanthus floridus, sweet scented shrub, flowers blackish purple, valued for their great fragrance.

Robinia hispida, rose acacia, large, handsome rose flowers—succeeds best in light soils.

Syringa vulgaris, common lilac, purple, red, and white. *S. chinensis*, Siberian lilac, is of lighter and more graceful growth, and when large, presents a splendid appearance.

Chionanthus virginica, white fringe tree.

Early Summer Flowering.

Viburnum opulus, snowball, well known for the splendor of its large balls of brilliant white flowers.

Rhus cotinus, purple fringe tree, becoming remarkable towards autumn for the feathery investment of its large panicles, resembling clouds of purple mist among the foilage. Singular and much admired.

Cytisus laburnum, common laburnum or golden chain; its pendant racemes of fine yellow flowers give it a very elegant appearance.

Symphoria racemosa, snowberry, well known for its pure-white berries in autumn.

[During this part of the season, roses make a most brilliant display. Among the thousand varieties named in catalogues, even a select list would be *too long* for this article; but the culturist may content himself, if he can procure as fine ones as the *Queen of the Prairies*, *Baltimore Belle*, and old and new *Crimson Bour-*

salls, for training; the *Persian Yellow* and *Scarlet Austrian*, for early flowering small roses; *La Reine*, *Madame Laffay*, and *Marquise Boccella*, among hybrid perpetuals, which flower till winter, and are quite hardy; *George the fourth*, *Bonne Geneveive*, and *Brennus*, of hybrid China roses; and *Souvenir de Malmaison*, among Bourbons, and *Madame Hardy*, among white roses.]

Late Summer Flowering.

Hibiscus syriacus (althæa) single and semi-double, white, shaded with purple; the double varieties have less beauty of form.

Magnolia glauca, large handsome white flowers, of rich appearance.

Æsculus macrostachya, dwarf horse-chestnut, flowers in large showy spikes of clear white.

Spiræa tomentosa, flowers in reddish purple dense terminal racemes.

Everblooming roses form the most interesting and showy display from this time till late autumn.

Climbers.—Some of the most interesting are, the *Bignonia radicans*, trumpet flower, with its dark rich, trumpet-shaped corols; *Bignonia grandiflora*, with very large rich orange flowers, sometimes in magnificent racemes a foot long,—slightly tender; *Aristolochia tomentosa*, and *A. sipho*, handsome, delicate twiners, with singular pipe-shaped, but not showy flowers; *Clematis virginica*, or native clematis, flowers in fine white clusters; *Atragene americana*, flowering early; purple; *Periploca græca*, with a dense growth of fine glossy foilage; *Ampelopsis hederacea*, often covering the entire trunks of large forest trees, reddening to a brilliant scarlet in autumn; and several species of *Lonicera* or twining honeysuckle.

Herbaceous Perennials.

(Average season of Flowering at Albany and Rochester.)

Flowering early part of 4 mo.—(April.)

The *snow-drop*, *crocus*, *winter aconite*, *Pansey*, *Siberian squill* and *Persian Iris*, are the earliest spring flowers in open ground. The last is a plant of great beauty and fragrance. The *Erytheonium dens-canis* of Europe, is a beautiful reddish purple flower, and one of the earliest, appearing before either of the American species. The Siberian Squill is a small but very graceful plant, with fine brilliant deep blue flowers.

The *Hepatica triloba*, with its various shades of pink and purple, and with pure white; and the *Claytonia virginica*, with its beautiful pink striped flowers, —are both common natives of our woods, and are among the earliest when transferred to the garden.

The many varieties of *Primula veris* (cowslip, &c.) presenting yellow, orange, red, lilac, and purple, with their various shades; and with flowers single and double, from half an inch to an inch and a half in diameter,—are among the finest ornaments of early spring. The *hyacinth* is well known for its beauty, fragrance, and endless varieties.

Flowering latter part of 4 mo.

Our native woods furnish several fine early flowers; among them, *Sanguinaria canadensis* (bloodroot) and *Anemone thalictroides*, both with white flowers; *Corydalis cucularia*, of delicate growth and white recemes; *Erythronium lanceolatum*,* yellow, and *Pulmonaria virginica*, pale liquid blue, both elegant plants; while the minute *Houstonia cærula* and *H. cilislata*, though natives, are of rarer occurrence. *Phlox reptans* is a fine purple-red flower. The several species and varieties of *Narcissus*, are a showy family of plants. The *crown imperial* (Fritillaria imperialis) is a stately and handsome, but not brilliant flower, and *F. meleagris*, is less showy, but singular. But the *tulips*, with their numerous shades of nearly all colors, variously intermingled and variegated, with nearly unsurpassed brilliancy and gaiety, eclipse all other flowers at this season.

Early part of 5 mo.—(May.)

Aquilegea canadensis (native columbine) with flowers of combined yellow and red-orange, is brilliant and elegant. *Phlox divaricata*, from the woods, with white variously shaded with blue and purple, is a handsome flower. Phlox subulata, moss pink, is extremely showy in masses, covering whole square yards with an unbroken mass of flowers. *Phlox setacea*, is a more delicate and less rapid grower, but nearly as showy; and a variety of the latter, with flowers of snowy whiteness, though slightly tender, is a desirable plant. The *auricula*, flourishing only when shaded, is remarkable for its clear rich hues of yellow, red, and purple. Among other plants flowering at this season, are, *Dodecatheon meadia*, reddish purple and white, an elegant plant; Delphinium tricorne, a fine early blue larkspur; *Convallaria majalis*, lily of the valley, with pretty white flowers; *Polemonium cæruleum*, blue; *Silene pennsylvanica*, red; *Corydalis glauca*, purple and yellow; *Veronica spicata*, blue.

Latter part of 5 mo.

Trillium grandiflorum, white; *Veronica gentianoides*, blue; *Geranium sanguineum*, red; *Trollius europeus*, yellow; *Phlox ovata*, rose; *Pæonia tenuifolia*, dark crimson,—are all fine though not splendid plants. Some double varieties of *Aquilegea vulgaris*, or garden columbine, are very rich and fine. The genus *Iris*, with its many showy species of blue, purple, yellow, variegated, mottled, and white, forms a very conspicuous group. But the most splendid flowers are the Pœonias—among the finest of which are the *Pæonia albiflora*, with its varieties,—*Whitleii*, pale pink becoming white, in large globular double flowers five to six inches in diameter,—*Humei*, dark rose, large and densely double,—and *Fragrans*, red, not so large, but very fragrant; P. Pottsii, with flowers of dark rich velvet crimson; P. Reevesii, splendid double rose; and the rose and pink varieties of *P. officinalis*: These are all perfectly hardy, and of very easy culture, the double flowers usually varying from four to six inches in diameter.

Early Summer Flowers.

Among those which are decidedly of the first class for ornament, are the following:—*Dictamnus fraxinella*, with its white and purple varieties; *Phlox maculata*, fine red; *Spiræa aruncus*, with large feathery plumes, and *S. filipendula*, smaller and of clearer color —both white; *Clematis erecta*, from two to four feet high, a mass of white bloom; *Gladiolus communis*, red-purple; *Campanula persicifolia*, blue and white, the double white variety truly splendid; *C. grandiflora*, with large, blue, rich flowers, and elegant growth; *Digitalis purpurea* (fox glove) richly dotted purple, and white; *Lythrum salicaria*, and *L. virgatum*, purple; *Orchis fimbriata*. with beautiful fringed purple spikes, native; and *Papaver orientale* and *P. bracteatum*, oriental and Caucassian poppies. *Papaver nudicaule*, a biennial, is one of thefinest clear rich yellow flowers.

Mid-Summer.

The duration of the earliest flowers of spring, is of but few days at fartherest; but as we advance in the season, the period of each plant is greatly prolonged, many in summer and autumn continuing for several weeks. Hence a fewer number is required to maintain a continued bloom.

Some of the finest flowers of mid-summer are the following:—

Spiræa ulmaria, pure white; and *S. lobata*, pink-purple, flowers in the richest fringed or feathery masses.

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* This fine early flower, sometimes called "*dog-tooth violet*," is evidently the plant described in Bryant's "*Yellow Violet*,"—there is, however, no more propriety in dropping the first part of the name, and calling it simply a violet, than to call a certain bird, known as a *titmouse* (plural tit-mice!) a *mouse*.

Lilium canadense, dull orange, but very elegant in form, and *L. candidum*, common white lily.

Chelone barbata, red-orange.

Catenanche cœrulea, blue.

Spigelia marilandica, red.

Monarda didyma, scarlet.

Phlox paniculata, light red.

Nuttalia digitata, purple.

Liatris spicata, and *L. scariosa*, purple.

Lathyrus latifolius, (perennial pea,) purple.

Yucca flaccida, white. A rich, elegant, and showy plant.

Campanula carpatica, blue.

LATE SUMMER AND EARLY AUTUMN.

Many of the preceding, continue flowering into autumn. The following may be named in addition:—*Dracocephalum virginianum*, red-purple; *Cassia chamæchrista*, and *C. marilandica*, yellow; *Lilium tigrinum*, (tiger lily,) red-orange; *Hibiscus palustris*, and *H. carolinense*, rose-red; *Gentiana saponeria*, blue, and *G. crinita*, light blue; *Aster novæ-angliæ*, purple.

Dahlias form the most splendid autumnal show of herbaceous perennials, but as is well known, are tender and often difficult to winter.

Annuals constitute a very fine department of late summer and autumn flowers, immediately following the season of herbaceous perennials. They need, as every one knows, yearly renewing by seed, and hence many neglect them on account of the care of sowing and seed-saving. Among the finest annual flowers are the following:—*China Aster*, many varieties; Yellow and purple Sultans; Cypress vine; Globe Amaranth, Balsams; African Hibiscus; Nasturtium; Scarlet Portulacca, Drummond's Phlox; Petunias, of several colors; Two-colored Collinsia; Dwarf Convolvulus; Mexican Ageratum; Three-colored Gillia; Dwarf Larkspur; Golden Coreopsis; Showy Calendrina; Scarlet Cacalia; French Marigold; and Dwarf Lupin.

Tender and greenhouse plants afford many valuable additions to summer and autumn flowers. Many interesting additions might also be made to the preceding lists, did space permit; but our object at present is to furnish only a select and limited collection, to assist those but partially acquainted with them, and who wish to cultivate but comparatively few.

Abstract of Remarks on Various Pears,

DESCRIBED IN THE FIRST VOL. OF THE HORTICULTURIST.

(*Continued from page* 87.)

Flemish Beauty—Cheever Newhall (416) recommends this pear for strong rich soils. J. J. Thomas (480) says it is "a large, fair and productive variety, and though not of first rate flavor, proves worthy of cultivation." First of November.

Fondante d'Automne—Mr. Ives of Salem, Mass., (279) says "that no autumn pear surpasses the Fondante d'Automne." Mr. Downing observes, "we have always found this variety truly delicious." Last of September.

Glout Morceaux—M. P. Wilder (21) says of this: "It is truly an excellent, rich, sugary pear. The tree is hardy, a great and constant bearer; but it requires, like most pears, good cultivation. Few varieties succeed so well on the quince as the Glout Morceaux; a tree of which in my own ground, annually produces a barrel of large perfect fruit." Otis Johnson (146) says the Glout Morceaux does not succeed well in his garden at Lynn, Mass. His trees of this sort are on "quince stocks—of good size, and all quite thrifty. The fruit sets plentifully, but blights and falls at an early stage, and this is the only variety under my cultivation that blights." Downing (146) remarks, that though highly valuable elsewhere, it may prove too delicate to be worthy of cultivation quite so near the sea, even on quince stocks. Cheever Newhall (415) recommends the Glout Morceaux for strong, rich soils. December.

Heathcot—Downing (241) makes this one of a select list of twelve. Cheever Newhall (415) considers it one of the best. Downing (417) thinks this pear has not been rated as highly as it deserves to be, and states that Col. Wilder, after several years trial, considered it nearly, if not quite equal, to the White Doyenné. "When we add to this that the tree is thrifty, and a good and regular bearer, that the fruit does not crack or blight, we cannot but consider the Heathcot worthy of being adopted into a select list of fruits, of the first quality, for orchard and market cultivation." Middle and last of September.

Jargonelle—Cheever Newhall (415) considers this and the Madeleine the best quite early pears, which, however, he says cannot "be classed as first quality." J. J. Thomas says (480)—"The Jargonelle is a fine early pear, rather course but quite rich in flavor, and needs indispensably house ripening, not only to perfect its flavor, but to prevent the inevitable rotting at the core when left too long on the tree." Last of July and first of August.

Louise Bonne de Jersey—Otis Johnson (278) named this, as in his opinion, the best fall pear. "The Louise Bonne de Jersey," he said, "is the most productive on young trees of any pear I cultivate; and I think if I could have but three, I would be forced to include it; yet I may alter my opinion when the trees become older."

Madeleine—J. W., Baltimore, says (99)—"The Madeleine pear is now (July 14th) in perfection with me. It has fruited for two years past; but I am obliged to say that generally it does not ripen well. It is apt to rot at the core." Mr. Downing in a note to the above says: "The Madeleine, and we may add, almost all other pears, *must be ripened in the house*. If left to ripen on the tree, they have little or no flavor, and soon decay." Cheever Newhall (415) writes—"For early fruit the Madeleine, (or Citron de Carmes.) ripening in my garden the last of July, and the Jargonelle about ten days after, are the two best pears of the season, but cannot be classed as first quality. * * * With me the Madeleine succeeds well on its own roots, but on quince roots it cracks, is very astringent and worthless." J. J. Thomas remarks (480) that with him the Madeleine maintains its high character. Middle and last of July.

Napoleon—W., of Baltimore, says of this pear—"When in Paris, at the end of September, the Napoleon was one of the principal pears in season; it is juicy, but not high flavored."

Onondaga—*Swan's Orange*—Downing thus speaks of this new variety: "A fruit of the first size and quality, in all respects; supposed to be an American variety. * * * As a productive and vigorous tree, and a large and most excellent fruit, it has probably not one superior as an October pear."

Osband's Summer—This is a popular variety in the neighborhood of Rochester. W. R. Smith, Macedon, N.Y., says of it: "This beautiful and excellent native pear has acquired considerable notoriety in this vicinity, and is destined, without doubt, to take rank with the best of its season. * * * It is a fine grower, and bears young and well. * * Size scarcely medium." Early in August.

Oswego Beurre, or *Reed's Seedling*—Downing (324) says of it—"It combines, in a great degree, the finer qualities of the White Doyenné and the Brown

Beurrè; is a remarkably hardy, thrifty sort, an early and abundant bearer, and will undoubtedly soon become a very popular variety. Fruit of medium size. * * * It ripens at the same time with the White Doyennè, and keeps well. From its early and abundant bearing, and its gradual maturity, it is admirably calculated for a market fruit." J. W. P. Allen, Oswego, (533) considers this pear the most valuable known at the north, *for general* cultivation, on account of its early and profuse bearing, its fine flavor, good size, and general hardiness. He considers it an early winter, rather than a fall fruit.

Passe Colmar—M. P. Wilder (21) thus speaks of this well known pear—"As a hardy, vigorous excellent pear, the Passe Colmar has few superiors. It is prolific to a fault, and requires judicious management. To insure fine fruit it is necessary to commence the trimming process as early as the best specimens can be distinguished. Mr. Wilder recommends this as one of the *best five winter* pears. Cheever Newhall (415) says—"The Passe Colmar seldom attains perfection, unless the fruit spurs are severely pruned out in the spring, or the fruit thinned when quite small." J. J. Thomas (480) says—"the same objection occurs here to the Passe Colmar, as at Dorchester, the fruit very rarely attaining perfection under ordinary management." November to February.

Pratt—A new Rhode Island pear. Downing (210) says "there is every reason to believe that among the many sorts annually offered to public notice, most of which prove indifferent in quality, this will be an exception—a fruit of real merit." Size above medium. September.

Seckel—This little world-renowned "mouth-water," *patiently receives* the encomiums of all. W., of Baltimore (197) says: "I was told in England, by gardeners and fruiterers, that the Seckel was the best flavored pear known, but that it would not keep in their climate." John C. Lee (279) considers it, all in all, the best fall pear. Downing (279) recommends it as the best fall pear for gardens south and east of Newburgh. J. J. Thomas (480) observes that the Seckel maintains its high character with him. August to October.

Skinless—Of this J. J. Thomas (480) says—"The Skinless is one of the freest growers of all pears, is abundantly productive, and always bears fair and uniformly good fruit, though not rich and high flavored. It ripens before the Bloodgood, and, all points considered, is one of the most desirable early pears, especially on clayey soils." First of August.

Urbaniste—Cheever Newhall (415) remarks—"The Urbaniste is more sure of producing a crop of *well-ripened* fruit, than any other variety I cultivate except the Bartlett and Vicar of Winkfield." J. J. Thomas (480) says—"The Urbaniste is an excellent pear, but is too acid for many palates, and is a very moderate bearer." September to November.

Vicar of Winkfield—M. P. Wilder (278) considers this, taking all things into consideration, the best fall pear. "His high opinion of this variety was based on a thorough trial of its good qualities; which were these: regular and great productiveness, never blowing off the tree, large, fair, unblemished fruit, and its remaining a long time in use." "True," he added, "the fruit is only second rate; but while it is of fair quality for the table, it is excellent for a long time for cooking." Saml. Walker (278) coincided in this opinion, and says (458) that this pear requires careful ripening. November to January.

Winter Nelis—M. P. Wilder (19) remarks of this pear—"As a sweet, melting winter pear, it has no equal. Connoisseurs generally prefer the brisk, vinous juice of the d'Aremberg; but some of our good judges esteem the Nelis above all others of the season. The growth of the tree is not strong, but more so on the quince, to which it seems well adapted; it is hardy and thrifty in rich soils, otherwise the shoots are more stunted and feeble than is usual with most sorts. Keeps and ripens well, and bears good crops." It appears (279) to be the favorite winter pear of Robt. Manning, J. M. Ives, and John C. Lee. Downing in the same article (pomological gossip) remarks that the "Beurré d'Aremberg and Winter Nelis are about equally popular as winter fruits—the former being the best bearer, and the latter the most luscious flavor." J. J. Thomas (480) says that with him the Winter Nelis maintains its high reputation.

It may be noticed by some, that I have omitted, in the above abstract, three or four varieties of pears which were noticed in the first volume of the Horticulturist. These were either new native varieties, described for the first time, or foreign sorts not yet introduced. As this abstract is chiefly valuable to those who already have some acquaintance, by books, or otherwise, with the varieties named, I thought that nothing less than a complete description of new and unknown varieties would be satisfactory to them. This, the limits of an abstract would not allow.

Toledo, Feb. 9, 1848. F. J. Scott.

Transplanting Fruit Trees.

The experience of intelligent cultivators in different parts of the country, strongly sustains the opinion, that a great loss usually results from a neglect of pruning the tops of young trees, at the time of transplanting. Of the hundreds of thousands which are annually transferred from nurseries to private orchards and gardens, probably not one in twenty receives sufficient trimming or heading back.

Unskilful or improper trimming—applied to the side branches of the trunk, and leaving a heavy head at top, is very common. The head thus becomes too heavy for the slender stem to support, the latter forming, as a western cultivator remarks, "a graceful curve, in the shape of a French dancing master in the act of picking up a lady's fan." It must be distinctly borne in mind that it is not this kind of pruning, but thinning and shortening back the top, which it is intended here to recommend.

To remove a young fruit tree from the nursery, without a loss of a part of the roots, is totally impracticable. A network of fibres often extends on every side, to a distance quite equal to the heighth of the tree. Roots more than a foot in length, except for unusually large trees, are scarcely ever taken up by the most careful nurserymen. Hence a considerable excision becomes unavoidable. As the roots which remain to the tree, must supply moisture for all the leaves, it becomes evident that the number of leaves must be either lessened, or else each leaf will only receive a partial supply, in which latter case, its growth cannot be healthy and vigorous.* The top should therefore be trimmed by the knife, at least as much as the roots have been trimmed by the spade. Trees four or five feet high, usually lose at least half their roots by removal, and those nine or ten feet high, probably at least four-fifths.

The amount of thinning at the top, must, however, vary somewhat with the species of fruit tree. Some, as the peach, have a strong reproductive power. A young peach tree, may be cut off at the surface of the ground, in spring, and a new shoot will arise and attain a height in autumn nearly equal to that reached where there is no heading down. The practice is common among nurserymen, of removing peach trees while in bud; these are headed down nearly to the surface, yet such buds often make a growth the same season nearly or quite equal to those buds not transplanted. Hence, a transplanted peach tree will bear a very heavy pruning at the top, with no ultimate loss, but an actual gain, in the growth and size of the tree. A cherry tree has less reproductive power—a young seedling cherry, headed down when transplanted, will not make near so fine a growth as if left uncut at top. Hence cherry trees should be more sparingly pruned when set out. The reproductive power of the apple lies between the two; and should consequently receive a considerable, but not excessive pruning.

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* That is, until by growth, a new set of roots is produced.

The amount of thinning must also depend partly upon the climate. Where moisture is prevalent, less pruning is required than under the influence of dry, hot summers. Hence the climate of England admits a greater quantity of top and leaf, than that of the United States.

Many experiments might be adduced to show the advantages of freely pruning transplanted trees. As a sample of the whole, we need only to refer to two interesting experiments given in the Horticulturist. One hundred and eighty apple trees, in fair condition, were transplanted carefully in good ground. One half had their tops shortened back, so as to leave only one bud of the previous season's wood. The other ninety were set out without any shortening. Of the pruned trees, only *two* died—of those not pruned *eight* died. The pruned trees nearly all made vigorous shoots—some eighteen inches. The unpruned grew but little, none making shoots over six inches. The second year, the pruned trees outstripped the others in size and growth, and presented a much more luxuriant aspect. The second experiment was performed with 78 peach trees, three years from the bud, and consequently of large size. One half had their heads reduced one half; the other were planted entire. The season was dry. *One* only of the pruned trees died, the rest made fine bushy heads. *Twelve* of the unpruned trees died, and none made a fine growth, many of the branches dying —nature thus performing imperfectly what the knife should have done.

The annexed figures will exhibit more distinctly the proper mode of heading back apple and peach trees. Fig. 1 is a young apple tree with branches remaining, as commonly taken from the nursery; fig. 2, the same trimmed to a few branches, and those headed back within a few inches of the stem. It is better to leave for these side branches, vigorous shoots of the past year, and cut off closely all others. Should the top, as represented, be too high, the tree must be headed down lower, as to the dotted line *a* in fig. 1, leaving the tree in the form of the portion above *b* in fig. 2, the dotted line *b* representing in this case the surface of the ground. Peach trees may be treated in a nearly similar way.

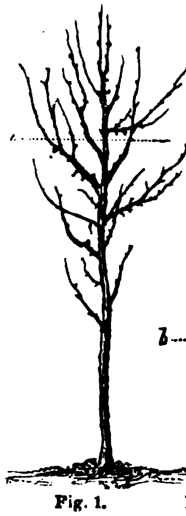


Fig. 1.

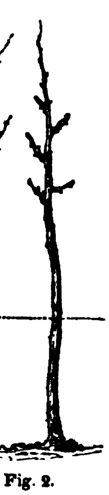


Fig. 2.

Trees of moderate size, set out in spring, and thus freely pruned, scarcely ever need staking. If set out in autumn, the pruning should be deferred till spring, which is indispensable with half-tender trees, as the peach, and in which case they must be secured from the effects of the wind by a stake, or by a mound of earth. If a stake is used, care is needed to prevent chafing the tree, by the use of a large soft band. We have found a mound of earth one foot high, with a piece of turf at top encircling the tree, a sufficient stiffener against all winter winds. Such a mound also excludes the frost from the roots, and renders autumn transplanting of peach trees comparatively safe. It is levelled to the surface in the spring after the head is pruned.

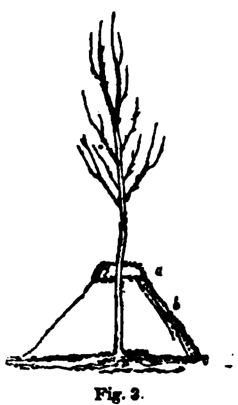


Fig. 3.

In the annexed figure (fig. 3,) *c* indicates the common surface of the ground, the dotted lines at *b* the mound of earth, and *a* the piece of turf at top for more effectually securing the tree to its place. One of these mounds is thrown up with a spade in thirty seconds.

There are some other important requisites in successful transplanting more or less known to cultivators: among the principal are,—pruning off all the bruised ends of roots, to prevent decay spreading; pouring in a few quarts of water to settle the fine earth among the roots, before the whole is quite filled; and setting the tree at the same depth as before removal, raising the mellow earth in a convex form two or three inches above the surface, to allow for settling.

Grafting and Pruning Old Orchards.

[The writer of the following has had much experience, and has shown unusual skill, in the successful management of Fruit Trees, and his remarks are commended to the attention of orchardists.—Ed.]

There are thousands of large apple trees grafted every year, and much loss is often experienced from a lack of knowledge as regards their management. I have thought that the experience of one who has spent much time in grafting and pruning such trees, might be a benefit to those about having the work done. Trees are often mutilated and disfigured by ignorant persons. Some have thought that a few limbs grafted on the top of a large tree was sufficient—the other branches were cut off close to the trunk. Such persons do not consider that the larger the top, the more fruit the tree will produce. When there are but few limbs left, nature makes an effort to supply that which is lost; they make a vigorous growth of wood, and it is many years before much fruit is borne. The wounds that are made soon begin to decay, cavities are formed, and water accumulates in the trunk, which is taken up and carried into circulation by the sap, often causing death to the tree in a few years. A few such trees as I have described would spoil the beauty of any farm or rural scene, let all other improvements be what they may.

But I shall endeavor to show in as plain a manner as possible, (I do not pretend that it is perfect,) my way of management. In grafting large trees it is necessary to form a round well balanced top; and in order to effect this, the lower limbs should be grafted near their extremities. The next grafts above, nearer the centre of the tree; for young grafts make an upright growth, and if one set is placed directly above and near the lower, they soon grow together; but if placed gradually nearer the centre as you proceed in forming the top, the fruit will all be exposed to the sun and air alike, and all the grafts will have an equal chance to grow.

In trimming newly grafted trees, a fine saw should be used; and in order to create a free growth of wood the trees should be attended to early in the month of March or beginning of April. The limbs should not all be cut off the season after grafting; for if trimmed too much at first, too much sap is forced into the grafts, which are apt to be blown off by the high winds that occur during the summer. When this happens, the trees are nearly ruined, and no skill can restore them. The practice of pruning apple trees in the month of June, may be well enough where the present crop is an object; but it is proper for every one who undertakes such work, to understand the difference between pruning to create a growth of wood in newly set grafts, and pruning to benefit the fruit which is growing on the tree. I. Hildreth. *Seneca, N. Y., Feb.*, 1848.

Apricots.

A correspondent in Virginia inquires how apricots succeed when budded on young peach trees; and which are the best varieties.

We have found the apricot to succeed well when budded on the peach at the surface of the ground. When the tree is transplanted, it should be set a little lower. to exclude the eggs of the peach worm. It is hardly necessary to say that the peach stocks should be healthy and entirely free constitutionally or otherwise, from the yellows. The plum is usually preferred as a stock for apricots, but we have not found that striking superiority which some authors have described.

The best standard varieties are, the *Breda*, remarkable for vigor and productiveness; the *Peach* and *Moorpark*, for large size and fine quality; the *Black*, for its extreme hardiness (equal to that of an apple-tree,) though second in quality; and the *Large Early*, rather new in this country, for its early maturity.

Pears for Vermont.

A "Vermont subscriber" wishes to inquire "what experience says of grafting the pear upon thorns close to the ground; its effect upon both tree and fruit. Also the best twelve varieties for enduring the hard winters and late frosts of Vermont, yielding the greatest quantity, largest size, and best quality."

The thorn does not appear to have been much used as a stock for the pear in this country; consequently it cannot be recommended with confidence. In England it has been employed to a considerable extent, and has succeeded well, especially on hard clayey soils where the pear does not otherwise thrive well. It should be grafted below the surface. It is believed to render the fruits harder and smaller than on pear stocks. The trees are rendered less vigorous, and come sooner into bearing. But after extensive trial, the quince is greatly preferred for dwarfs.

The propriety of planting trees with quince stocks for extensive marketing, in a country where land is cheap and trees dear, may be questioned except for a very few varieties. The only instance we know of extensive plantations of such trees, is the large orchards of T. Rivers of Sawbridgeworth, England, which consist chiefly of the Louise Bonne of Jersey, a large fine pear, which succeeds uncommonly well on the quince. Where trees can be procured cheaply by the quantity, and where it is desirable to obtain speedily a crop, there is no doubt it may succeed, provided the land is kept highly fertile and in good cultivation, and suitable varieties are selected.

It is very difficult to furnish select lists of fruits, adapted to particular regions of country, where *all* the best varieties have not been fully tried. The difficulty is much increased by the different degrees of excellence which different cultivators attach to various qualities. The following twelve varieties however, may be employed perhaps with a promise of good success, for the qualities indicated by our correspondent.

For *Pear Stocks*—Golden Bilboa, Bartlett, Louise Bonne of Jersey, Onondaga, Flemish Beauty, Dix, Beurré Bosc, White Doyenné, Stevens' Genesee, Vicar of Winkfield, Beurré d'Aremberg, Columbia. These are all fine table pears, mostly quite large;—if for cooking, the three following winter varieties may be chosen: Catillac, Pound or Winter Bell, Black Worcester.

A part of the preceding have been found to succeed well on the quince, and some others may, on more extensive trial. The following however are recommended from experience *for the quince*, among large pears: Louise Bonne de Jersey, Duchesse d'Angoulême, Long Green of Autumn, Beurré d'Aumalis, Vicar of Winkfield, Golden Bilboa, Beurré Diel, Beurré d'Aremberg, Glout Morceau.

Apples at the South.

"Will apples that ripen late, and keep during the winter in your latitude, answer as good winter apples in this State?" J. R. G. Halifax, N. C.

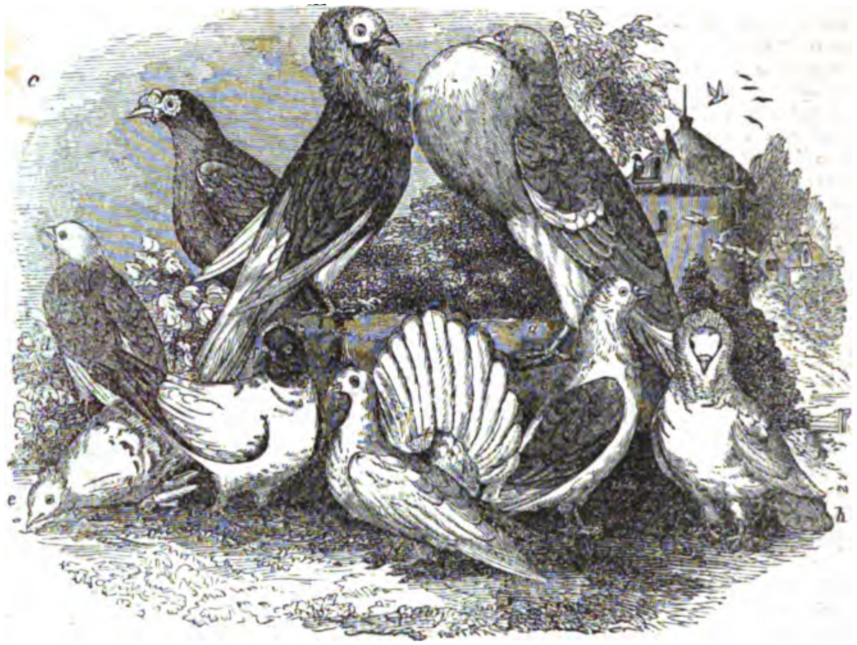
The winter apples of the Northern States, as they are removed South, mature earlier, and consequently are diminished in keeping qualities. As far south as Georgia, some ripen early in autumn. Those varieties which are little changed by climate, as for example the Rhode Island Greening, in other respects do well; but others, as the Baldwin, which are liable to variation, could not be depended on for quality. Indeed, it is exceedingly problematical whether the Baldwin would prove of much value as far south as Virginia. In the extreme southern states, new varieties originated there are found to succeed best. So far south as North Carolina, it is not probable that any of our sorts would prove winter apples except our longest keepers. The *Newtown Pippin, English Russet, Tewksbury Blush, Willow Twig*, of Ohio, *Rawle's Jannet*, and *Pryor's Red*, would probably succeed well. The latter, which proves a good winter apple in Western New-York, would probably become a late autumn variety in North Carolina.

Mulching Fruit Trees.

A correspondent of the Horticulturist planted 150 trees in an orchard in very good but rather dry soil. All were planted with equal care, but a third of them were *mulched*, or the surface of the ground when planted covered with 6 inches of litter. Those thus treated all lived; but 15 of those not mulched died in the hot dry weather of midsummer. It is not stated that the soil was kept clean and mellow around them; which will often save the life of trees, when they would die of neglect.

Raules' Jannet Apple, or Neverfail.—Eli Nichols, an intelligent cultivator of fruit in central Ohio, in speaking of this celebrated long-keeper, in connexion with the Summer Queen, says:—"I have eaten the Queen and the Neverfail each of perfect flavor, on the same day, the first from the tree, and the last from the cave of a neighboring tenant farmer, put up in the most careless manner; and I must testify that the Neverfail, in flavor, seemed more than a match for the Queen, although one year older."

Cranberries on Upland.—Mr. Gardner, of Massachusetts, according to a statement in the Farmers' Cabinet, raised a full crop of cranberries last year on upland, while those on their native swamps were killed by frost.



DOMESTIC PIGEONS.

The family of birds called *Columbidæ*, or pigeons, as arranged by naturalists, comprehends five distinct groups, each containing several species. These birds are, from their characters and habits, objects of much interest. "In no tribe of the feathered race," says the author of the "Natural History of Pigeons," "do we meet with a plumage better adapted to gratify and delight the eye, than that of the pigeons." The variety and brilliancy of the tints, are hardly surpassed even by the humming-birds.

The domestic varieties of the pigeon, have, it is believed, derived their origin from one species—the wild Rock Pigeon, or as it is sometimes called, the Stock-Dove. They have become so numerous that it would be difficult to describe them all, though there are no less than twenty-eight varieties which have been held in more or less estimation by *fanciers*, or breeders. "But," says the author above referred to, "however diversified their forms, color, or peculiarity of habit may be, we consider them all as having originated from a few accidental varieties of the common pigeon, [or rock pigeon,] and not from any cross of that bird with other species, no sign or marks whatever of such being apparent in any of the numerous varieties known to us. In fact the greater part of them owe their existence to the interference and the art of man; for, by separating from the parent stock such accidental varieties as have occasionally occurred, by subjecting these to captivity and domestication, and by assorting and pairing them together, as fancy or caprice suggested, he has at intervals originated all the various and peculiar varieties which, it is well known when once produced, may be perpetuated for an indefinite period, by being kept separate and unmixed with others." Among other evidences of the correctness of this position, it is worthy of particular note, that all domestic varieties of the pigeon, breed readily with each other, and generate a fertile offspring; which it is not probable would be the case if they had originated from distinct species.

The parent species of the domestic pigeon is an inhabitant of the eastern continent, and is extensively distributed through the maritime districts of Europe, Asia, and Africa. It naturally inhabits the high clefts and caves of rocks near the sea. It is abundant along the rocky coasts of England and Scotland, and in the Hebridean and Orkney Islands. Man, it is said, "has only taken advantage of certain habits natural to the species, and by the substitution of an artificial for a real cavern, to which the pigeon-house may be compared, has without violating or at least greatly infringing upon its natural condition, brought it into a kind of voluntary subjection, and rendered it subservient to his benefit and use."

The pigeon has been kept in a state of partial domestication for a great length of time. They are mentioned by the earliest writers, and were held in great estimation by nations of antiquity; by some of which, especially the Assyrians, they were consecrated to sacrifice. In their wild as well as domestic state, they are remarkable for their rapid increase. An old writer calculates that from a single pair 14,760 may be produced in the space of four years. The female lays two eggs at a time, which, if they hatch, it is said invariably produce a male and female. The period of incubation is fifteen days; and in a domestic state, each pair hatches once in five or six weeks; in a wild state they rarely hatch more than twice in a season. The male and female relieve each other in sitting.

The most esteemed domestic varieties of pigeons, are known under the names of carriers, powters or croppers, tumblers, horsemen, jacobines, nuns, owls, runts, turbits, trumpeters and dragoons. There are particular individuals, called *fanciers*, who make the breeding of pigeons a *profession*, and those which they particularly cultivate and esteem, are called *fancy* varieties. Notwithstanding the striking peculiarities of these varieties, it is said that the fanciers can, by a skilful pairing of male and female, "breed them to a feather."

The *Carrier* (*c*) is remarkable for its powers of flight, and for an innate sagacity or instinct which prompts it to return to its home, when it has been carried away and set at liberty. For this reason it has long been used as a medium of communication between distant places; and for speedily conveying intelligence of important events or transactions. Letters of light paper are attached to their wings; the bird is then let loose, when it takes a spiral flight till it reaches a great elevation, and then immediately darts off with great speed in a direct line to the spot from which it was taken. They are trained by taking them when young to a little distance from their cotes, or habitations, and letting them fly back; afterwards they are carried farther and farther at each trial, and so on until they will return home from a distance of many miles. The carrier is one of the largest and strongest of the pigeon family. Its shape is handsome and its attitude and motions graceful. Its color is various, but those of a dark bronze or brown are preferred. On its bill and head it has a fungus-like excrescence, of a dingy white color, which gives the bird a striking singularity of appearance.

The *Dragoon* is similar in habit to the carrier, and is said to be as swift on the wing. It is recorded that on a trial in England, one of this variety flew 76 miles in 2¼ hours.

The *Powter or Cropper* (*a*) is principally esteemed on account of its habit of swelling out the crop. Most of the pigeons have this faculty to a limited extent. By a voluntary effort, the air is drawn into the œsophagus and crop, which, in the powter, become inflated to such a degree that the head is almost hid behind the enlargement, and the bird is obliged to walk in an upright position to sustain the centre of gravity.

The *Tumbler* (*d*) has an odd habit of throwing its body over in sudden evolutions, during its flight. This variety keeps much on the wing, and as they go in compact flocks and rise to a great height, almost beyond sight, constantly wheeling and tumbling as they ascend, they afford much amusement to persons who have the opportunity of noticing them. They have been known to remain on the wing from five to nine hours together, constantly busied in their "fantastic tricks."

The *Jacobine* (*b*) derives its name from a wreath of feathers which, rising round the neck, turn up over the head like the hood or cowl of a Jacobine priest. Of this variety, those are preferred which have the plumage of the body of a yellow color, a clear white head and white tail.

The *Ruff* (*h*) resembles the jacobine; but is not reckoned so valuable. Its chain or *cravat* is not so large and perfect as the former.

The *Capuchin* is a variety which, like the jacobine, receives its name from an order of monastics.

The *Nun* (*f*) is so called from its having feathers springing out from the head in such a manner as to almost *veil* the eyes.

The *Roman runt* is one of the largest of the tribe, and has been bred principally for the table.

Of *Fan-tails or Shakers* (*i*) there are two kinds—the broad-tailed and narrow-tailed. The former is most prized. In the best specimens the tail is set very broad, and so high that the head almost touches it, when the bird stands upright. The body is of small size, and the variety possesses no particular attraction except from the peculiarity of its tail, which, by contrast, gives variety and interest to a group. The color is white.

The figures in our cut were drawn from specimens bred at Mount Hope, the residence of E. P. PRENTICE, Esq.

THE FARMER'S NOTE BOOK.

Seeding Grass Lands.

EDITORS CULTIVATOR—Having traveled over a considerable portion of the southern section of Michigan the past season, I was led to notice in particular, the general barren appearance of the land, excepting such as was covered with cultivated crops. In many places the field next adjoining a luxuriant crop of wheat, would be covered with thistles and briars. In fine, it seemed to me as if many of the farmers had determined to run a race, to see who should first succeed in running down their land.

Wheat each alternate year being taken from the soil without an ounce of grass seed ever being sown, or if sown, only in the most sparing manner, from 2 to 4 quarts being thought sufficient for an acre of ground. The consequence of this mode of management is such, that land which has not been more than twelve years cleared from its primitive forest, has, if not run out, become at least thoroughly run down.

Now I would say, that from observations made during a series of years, both in the New England States, and in other sections of our common country, in which it has been my fortune at different times to be placed, I have found that the most successful farmers were those who were the most bountiful of their seed, especially of their grass seed.

Many farmers even at the east, who have had the benefit of Agricultural Societies, and the practice of skilful and judicious neighbors near them, from whom they might improve, lose at least 25 per cent. from their pasture and meadow lands, by sowing their grass seed too sparingly.

An old proverb, from good authority, which will apply well to this subject, as well as many others, declares that "if ye sow sparingly, ye shall reap also sparingly;" in no case will this hold more true than with regard to the cereal grasses and grains. If every farmer who does not sow at least from 10 to 12 quarts of grass seed per acre, would this spring sow upon one acre double the amount he usually sows, and note the result in comparison with the rest, sown in his usual manner, I am satisfied that there is not one in ten of these farmers but would increase the amount of their seed for the future.

It is somewhat difficult to give the precise amount that should in all cases be sown; much depends upon the preparation of the land, quantity of barn-yard manure applied, if any, adaptedness of the soil to grass, &c. As a general rule for mixed grass, not less than one peck of timothy or herds-grass, and from 4 to 5 lbs. of clover, should be sown to the acre; in some cases more may be profitable, oftener more than less. In low moist lands one half bushel of Red-top, and 4 quarts of Timothy, will be found an excellent mixture. Enough in all cases should be sown to completely cover the surface of the ground the first fall, and thus in a great measure keep in check the noxious weeds, and supply in their place good wholesome food, which your stock will relish much better than the hard worthless stalks of the weeds and briars.

It is natural for land that is in a good condition, or even in a medium state of productiveness, to produce something; and if you do not cover the ground with seeds of your own choosing, nature will, and generally with worthless plants. We should recollect that since the fall of man, the natural products of the mother earth are thorns and briars, while she is ever ready to repay with interest whatever we may bestow upon her bosom.

The deficiency of grass seed sown in this region (southern Michigan) is lamentable. One man, and he considered as good as the average of farmers here, lately told me he had never sown a pound of clover upon his farm since he first commenced to improve it, 14 years ago. The consequence of this management has been the loss of tons of valuable feed, the loss of the manure which that feed would have made, and the loss of the vegetable portion of the soil, which would in a measure have been kept up by the decomposition of the roots of the grass, when the land was prepared for wheat.

Lands that have been managed in this way for 12 or 14 years, will not now produce over one half of what they first did; and it would seem as if the most of the farmers in this section must soon see the bad effects of a too excessive cropping, without a rotation at least of grass well and thickly sown.

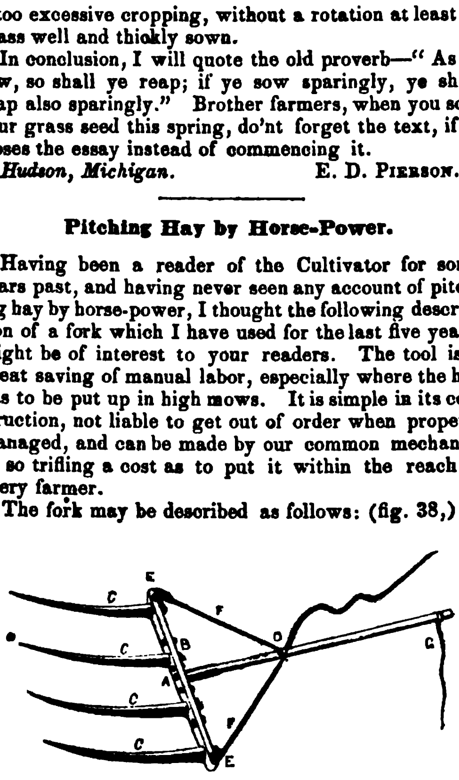
In conclusion, I will quote the old proverb—"As ye sow, so shall ye reap; if ye sow sparingly, ye shall reap also sparingly." Brother farmers, when you sow your grass seed this spring, do'nt forget the text, if it closes the essay instead of commencing it.

Hudson, Michigan. E. D. Pierson.

Pitching Hay by Horse-Power.

Having been a reader of the Cultivator for some years past, and having never seen any account of pitching hay by horse-power, I thought the following description of a fork which I have used for the last five years, might be of interest to your readers. The tool is a great saving of manual labor, especially where the hay has to be put up in high mows. It is simple in its construction, not liable to get out of order when properly managed, and can be made by our common mechanics at so trifling a cost as to put it within the reach of every farmer.

The fork may be described as follows: (fig. 38,) A is the head, 28 inches long, and 2¼ inches square, of white oak, or some other strong wood. B is the handle, 5½ feet long, morticed into the head, with an iron clasp of band or hoop iron to fit tight over the head, and to extend six inches up the handle, secured by two good rivets through the handle, to increase its strength. *c c c c*, the prongs of the fork, made of good steel, and of the right temper, ¼ an inch wide at the head, and drawn out tapering to the point. They are to be 20 inches long, 8 inches apart in the head, with a burr to screw them up tight, and a rivet on each side of the middle prongs, to keep the head from splitting. E E staples, riveted over the end prongs, to which the rope, F F is to be attached—the rope to be drawn together 3 feet from the head in the form of an A, and then the single rope to extend from that over a tackle-block, which is hung to a rafter at the peak of the roof of the barn, and 2 feet over the side of the mow, and thence to the bottom of the door-post, where another tackle-block is attached, under which the rope passes. G is a small rope, attached to the end of the handle, by which the fork is kept level as it ascends over the mow. As it approaches the place where the hay is to be left, the rope should be slackened in the hand, when the hay will tilt the fork so that it will discharge its load immediately. The fork, when loaded, is raised by a horse, which is attached to a swingle-tree to which the rope is fastened, near the lower pully or tackle-block abovementioned.. When the hay is discharged from the fork, back up the horse and be ready for another fork-full. The fork is drawn back by the small rope. In this way forks-full can be picked up nearly as quick as they can be by hand.



Hay Fork—Fig. 38.

A farmer that has a large quantity of hay to pitch, will more than get pay for the trouble and expense of a fork of this kind in a single year. With the assistance of a boy to lead the horse to the fork, a man can with ease pitch off 6 tons of hay per hour, and pitch it from 15 to 20 feet high. On a trial of speed, I have pitched a ton 15 feet high in 4 minutes. The fork does not cost over $5 without the blocks and ropes, and I think they can be had altogether, ready for putting in operation, of Garret Brown, Newtown, Bucks County, Pa., for $7. A Practical Farmer. *Bucks County, Pa.*, 1848.

Culture of Potatoes and Indian Corn.

Eds. Cultivator—In your last number, I notice an article on the prevention of the potato rot, and I think that by pursuing nearly the same course for the past four years, has been the means of saving my crop during that time. I generally plant good sized potatoes, cut in two or four pieces according to size, and plant two pieces in a hill, about six inches apart.

One of my neighbors, the past season, planted the same kind that I did, only they were small, about a fortnight before I did, and dug about three weeks after. More than half of his are unfit to eat, while in mine not one in a hundred is affected. It is my opinion that the potato has become degenerated by using small and unripe seed.

Also, an article entitled "fertility of the subsoil," where a person raised ears of corn 22 inches long, on soil that was raised from a well, reminds me of some timothy I saw growing on soil that was thrown out in digging a cellar, some of the heads of which were nearly 14 inches long.

Below I give you an account of my corn crop for the past season, grown on seven acres of land. It was a part of the field on which corn was raised in 1846, an account of which you published in the last volume—one acre of the field, the last year, being planted to potatoes:—

Plowing,	6¾	days,	$6.75	1st hoeing,	15	days,	$9.38
Harrow,	2	"	2.00	2d do	10½	"	6.50
Rolling,	½	"	50	Cutting up,	14½	"	9.00
Marking,	1	"	1.00	Husking,	54½	"	34.00
Planting,	9½	"	6 00	Drawing Stalks,	2	"	2.00
Cultivating,	4½	"	2.75				
							$80.88

At an expense of nearly $11½ per acre. We gathered from the field 20 loads of pumpkins, 1300 bushels of ears of corn, and 32 loads of corn fodder.

La Fayette, 20th Jan., 1848. E. V. W. Dox.

Stall-Feeding Cattle.

Editors Cultivator—While reading your remarks to correspondents, in the December number of the Cultivator, it occurred to me that I might give you something in the line of *an experiment*, from which one *fact* at least might be drawn, viz:—That it will not answer for a farmer who wishes to make money, living where hay and grain is as high as it is in most parts of Connecticut, to make beef entirely by stall-feeding, at ordinary prices. There is a profit in making beef, if it can be made mostly on grass, and many farmers think they can make it at a profit on grain; but there is not one to a dozen, after he has fatted a bullock, can tell how much he has given him. As he has got a heap of good manure, he guesses he has got his pay pretty well.

Experience, however, has taught me that it will not do to pay too much even for a good thing. In the experiment to which I allude, the prices of hay and grain are put low, or at what they would readily sell for at the barn; the beef at what it actually brought in market. I consider the manure an equivalent for the trouble. My aim in the experiment was accuracy, as near as possible. The hay was weighed three times per week to get an average; the grain and roots measured as given. I give the experiment as copied from my memorandum book.

Oct. 17, 1846.—Put up a pair of six year old oxen to fat—value as working oxen, $60—not saleable, being unruly; rather low in flesh, but perfectly strong and healthy. They were tied up in a warm but well ventilated stable; with light enough to see to eat well, and no more. Water was given them night and morning, as much as they would drink, varying from two to ten pails full per day. Most of the hay given them was cut in a machine, and wet up with their provender, to which a little salt was added daily. Their fattening qualities, judging from the handling, about a medium. They kept very quiet, lying down three-fourths of the time. Stables cleaned and well littered twice a day; oxen curried well once a day, and kept as clean as possible. Used about 3,000 lbs. of straw and stubble for litter.

The cattle consumed as follows:—

1st week—Hay 336 lbs—turneps 7 bushels.

2d week—The same.

3d week—308 lbs. of hay; 7 bu. turneps, and 1 bu. 24 quarts of provender—(corn ground with cob, worth 40 cents per bushel.)

4th week—Same as 3d.

5th week—280 lbs. of hay; 7 bu. turneps, and 1 bu. 24 quarts of provender.

6th week—280 lbs. hay; 10 bu. turneps, and 1 bu. 24 quarts of provender.

7th week—280 lbs. of hay; 10½ bu. turneps, and 2 bu. 20 quarts provender.

8th week—252 lbs of hay; 7 bu. turneps, and 7 bu. provender.

9th week—Same as 8th.

10th week—Same, except that the provender was half rye.

11th week—Hay and turneps same, and 7 bu. 28 quarts provender.

4 days of 12th week—144 lbs. hay; 4 bu. turneps, and 1½ bu. provender.

The oxen were slaughtered Jan. 7.

Cost of Oxen,		$60.00
3,280 lbs. hay, at $9 per ton,		14.76
88 bushels turneps, at 16 cents,		14.08
Provender,		20.40
Total expense,		$109.24
Beef, 1,592 lbs., at $5.87½ per 100,	$93.53	
Hides, 195 lbs. at 3 cents,	5.85	
Heads and plucks, less butchering,	62	
Total receipts,		$100.00
Loss,		$9.24

I would state farther, that through the whole time the oxen had as much hay as they could eat, and the last half of it as much provender; mixing it with hay prevented their sickening or cloying. LOZELLE J. PLATT. *Winthrop, Conn., Dec. 31st*, 1847.

Bread Making Machine.

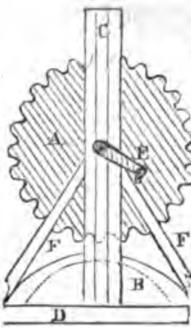


Fig 1—*End View.*

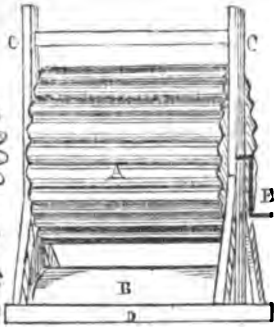


Fig. 2—*Side View.*

A, fluted roller; B, section of a larger roller; C, framework to support the roller; D, thick plank into which the frame is morticed;* E, crank of roller; F F, braces to frame.

EDS. CULTIVATOR—Seeing in your last number of the Cultivator, a notice of a premium being offered for a bread making machine which should not exced $5 in cost of construction, accompanied with a sketch of one by J. A. C., (which seems to me to be merely a common biscuit brake, such as is used by bakers,) I have been induced to send you the above drawings of a machine which I have used in my family with the very best results, the bread being as effectually kneaded as it could be done by hand, and with this decided advantage—that you know that it is clean, there being no occasion to make use of the hands, even in the mixing of the dough; consequently you may make any of your servants do the work. The first thing to do is to provide yourself with a tolerable wide plank, into which have two upright posts or pieces of scantling, C, C, of suitable size, say 3 × 3, morticed, and which are supported by the braces F F. Into these have a fluted roller, A, fixed—the flutes should be deep, and not coming to a sharp edge, but rounded, as shown in the sketch. Below this roller, and fastened to a plank, should be the segment of a much larger roller, on which the dough is laid when passing under the fluted roller. In those I have used this has been fixed; but some may suppose a moveable roller below would answer best, in which case they can have one fixed, as shown by the dotted lines—a piece of ¾ inch iron passes through the fluted roller, forming the axle and crank, as shown at E. The whole is exceedingly simple, and can be made by any jobbing carpenter. The iron crank can be dispensed with, and the axle formed from a part of the roller, to which a handle can be affixed, as is done to grindstones. Such was the one I made use of at first.

And now for the operation:—Take a wooden bowl or tray into which mix as much flower and water, with the necessary quantity of yeast and salt. Stir this well together with a wooden spoon, adding more flour as required until it has become stiff and of the right consistency. Form it into a roll or loaf, and place it on the large roller, and commence turning the crank. This will of course carry all the dough through, kneaded by the flutes of the roller. It will also of course be elongated and flattened. Now double it over, and reverse the motion of the crank, and you will pass the dough back to the side from whence it first came. Continue this operation as long as you may deem it necessary. Then take it and form into one or as many loaves as the quantity may allow. Place it in pans to rise, and when risen bake as usual.

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* By being attached to a moveable piece of plank, it can be more easily put away; and when to be used, it can be fastened on to a table or dresser.

I have thus sketched what I believe to be the most simple bread making machine (considering its efficiency) that can well be made. I have had one in use for many years, and speak from a knowledge of its perfect efficiency and adaptedness to the work. The bread made by it cannot be distinguished from that kneaded by a regularly instructed baker; and one of its great merits is, that by varying the size you may adapt it to a small family or a large hotel: for I have tested it for this latter purpose, having been the proprietor of a fashionable summer retreat far in the interior, where I could not always procure experienced bakers, I had to contrive something to aid me, and after I had had one of them made I found no difficulty, for then the pastry cook also made all the bread, and the bread was always light, and there were fewer failures in making it good after I commenced using this machine, than when the hands were used in kneading it. The size best adapted to a small family would be a roller about 9 inches long, and from 10 to 12 inches in diameter; the space between the rollers may vary from 1 to 2 inches. By bringing them so close, and continuing the revolutions a length of time, you have all the effect of a baker's brake for biscuits, produced, and of course you may make most excellent biscuits.

This machine possesses, I believe, all the requisites required by R. W. Jr., for claiming the premium offered by him, being "an effective machine for kneading and mixing dough, that shall be simple in its construction, easily cleaned, to occupy a small space, durable, and not to exceed $5 in cost, for one to work 5 lbs. of flour at a time;" and I enter it, therefore, in competition with that described in the December number of the Cultivator. In fact, knowing its efficiency by actual trial for several years, I hesitate not to show it against even the very expensive one described by Loudon in his Encyclopædia of Architecture, &c. L. *South Carolina, Dec.* 20, 1847.

Rearing Lambs for Market.

At our request, Mr. George Edwards, of Mechanicsville, Saratoga county, has furnished us the following account of his mode of managing sheep and rearing lambs for market:

"As my farm is near our large markets, and well adapted to what I call *mixed husbandry*—that is sheep, grain, and grass—the soil a loam, high and dry—I find the rearing of fat lambs the most profitable branch of farming. The ewes have generally been bought in September—always selecting those of rather coarse wool, they being larger, and generally the best nurses. The rams (pure South Downs) are put to them early in November, and the lambs are dropped about the first of April. The ewes are fed during the winter with corn-stalks and straw, and about one month before lambing and from thence till they go to pasture, they are each fed with three quarts of brewer's grains per day.

"Last year, 100 ewes raised 100 lambs. The wool, which was sold at Troy at 32 cents per lb., brought $104.75. Twenty-five lambs sold at $2 each, one ram lamb $5, one do. $3, and the remaining seventy-three at $1.75 each. They were all taken away by the last of July. The ewes were sold to the butcher at $2 each in October—so that the hundred ewes realized $490.50.

"It is desirable to get rid of the lambs early, that the ewes may have time to fatten, so that they may be sold to the butcher in the fall—giving room for a new flock which should be bought in for the next season.

"It is a good mode, and one which we have frequently adopted, if we have a piece of rye which had been sown on a clover sod, (or where the land was otherwise in good order) to plow the stubble the very moment the rye is off the field, and sow turneps. The furrows are first harrowed with a light harrow, lengthwise, and then crosswise—the seed sown broadcast, 2 lbs. per acre—ending with rolling the ground with a very light roller. The turnep called the stubble turnep, is preferred. A larger quantity of seed is sown than some use, in order to get a good stand in spite of the ravages of the fly. I have now procured one of Emery's seed-planters, and shall probably sow the turneps in drills henceforth—the rows two feet apart, to give space to work between them with a horse and small plow, or cultivator. As soon as the turneps are up about two inches, we put on the light harrows, passing both ways, keeping a straight course. If the turneps are in drills, the drags are only run across the rows. About two days after the harrows are run over the turneps, they are gone over with hoes, and thinned where they are in bunches.

"Ten acres of turneps, with a tolerable even plant, will supply and fatten 150 sheep, and will afford fine keep for them from the first of October to the end of November, (if there is not much snow) at a time when pasture is generally short. About one acre should be fenced off to commence with, and after four or five days, add about one-fourth of an acre every other day. At first the sheep will appear not to like the turneps, but after three or four days they will eat them rapidly. A boy should be placed with the sheep for two or three hours each day, to chop up the shells—the sheep will fall back and eat them up clean.

"While the sheep are on the turneps, it is an advantage to give them a little cut hay in troughs—say about three bushels per day for 150 sheep.

"Let any man try this plan, and if his land is in good heart, he will not only find his sheep get *really fat*, but they will leave the land in fine condition for a spring crop. It must be observed, the more attention that is paid to keeping down the weeds, the better will the crop pay cost."

Red Root—(*Lithospermum arvense.*)

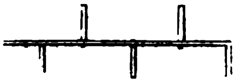
C. M. Stark, of Yates county, N. Y., says in the Transactions of the N. Y. Ag. Society, that 30 years ago the red-root was unknown in Yates county—now, it is so abundant, by neglect and increase, that hundreds of bushels are purchased at the oil mills at 19 cents per bushel; and if one dollar per bushel were given, the hundreds would be thousands. The ripening of this seed makes a tremendous draught upon the soil.

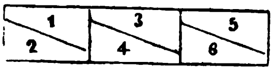
When first introduced, it may be cleaned out by careful, close, and constant weeding. This we know. But farmers generally will not do this till they have learned all the evils, and then it is too late. In such cases, it is proposed to eradicate it by a proper rotation. Plow once for wheat, 8 inches deep, to throw the seed too deep for germination, doing the rest of the work by the cultivator. Then, next autumn, plow the stubble the same depth, to bring up the seed, and harrow it; it will grow. The next spring, plow very shallow, or cultivate, and sow a spring crop. Again plow and harrow in the fall, cultivate in the spring, and plant corn as early as possible. This, if well tilled, will clear all growing weeds. Plow again early in autumn, the same way, and next spring sow some *other* spring crop. Then, seed with grass. The red-root, being a biennial, can hardly stand such a course.

To prevent carting seeds out with manure, it is recommended to thrash, and burn the wheat straw in a heap, on the field where it grew, looking to the straw of the spring crops to furnish manure. Then, keep a look out, especially near trees, for plants from seed dropped by the birds, which are to be carefully weeded out.

Economical Fences.

The following is a description of a kind of fences which I have tried considerably:—For posts I use 1¼ inch oak or hemlock plank, 2 inches wide at top, and 18 inches wide at bottom; 4 feet long, and set on 2 stones on top of the ground. It is 5 boards high, 3 of the boards being 6 inches, and 2 of them 5 inches wide, with a 5-inch board for a cap. The fence is straight, with half the posts on each side, thus breaking joints on each post. The boards may be 12 or 14 feet long. The fence has thus a base of 3 feet and an inch—the posts slanting and bracing in towards the top, which allows the plow to run close to them, and not interfere with the whiffle-trees. The fence will last as long as the boards, as every part is above ground. For fear of heavy pressure by unruly cattle, or the danger of being moved by high winds, I drive down, close to the slanting side of each post, a thin stake of oak, about one foot into the ground, and put a nail through it into the edge of the post, which makes it firm and secure. I put a two inch bat in front of each post, of inch board, which holds the boards from warping better than the nails alone. I make this kind of fence portable by using one post at one end, and one in the middle on the opposite side of a length, and on the other end a three inch strip of board, instead of a post, with two holes corresponding with two holes in the wide post on the first end of the next length, in which I put two pins connecting the lengths, and thus proceed. With this portable fence I enclose my stacks, confine my pigs on a small portion of my pea-ground, fallow, &c. I consider the economy of this fence such that I would not receive posts as a gift, and be under obligations to set them in the ground the usual way. I buy 1¼ inch plank, 20 inches wide, 12 feet long. Each plank is made into six posts by my wood saw running by horse-power. My bats are sawed by the same. I cut the plank for posts thus:—





Clyde, Wayne Co., N. Y. Jos. Watson.

Milking.

A writer in the Maine Farmer gives, from long experience, a number of rules for milking, most of which are very good, as—pare your nails short—sit on a stool —milk fast—never scold a cow—never get out of patience—tie her tail to her leg in fly-time, &c. But the following are objectionable: "wet the teats with the first stream of milk"—and "never strike a cow for running or kicking." Milk, applied to the teats to soften them, dries and forms a glossy varnish, which tends to cause cracking or chapping of these parts. Cold water is much better, becoming quite dry by the time the milking is finished, and leaving the teats clean and soft. Touching the striking of a cow—the rule applies well to ninety-nine cases in a hundred as now practiced—but judicious punishment will cure a cow amazingly quick. I speak from long experience. If a cow kicks much, place a switch under the left arm, the pail in the left hand, and if, while milking, she kicks, let it be followed invariably by a *single* blow. Never strike but once at a time, even if she kicks so hard as to break your leg—and never omit it, if she hits nothing. Soothe her at all other times. In this way she soon finds what the whip means, and shapes her conduct accordingly. A small mess of pleasant food at the time, will serve to do away any disagreeable impression in connexion with milking. By never striking but once, she has not time to "get mad," and it is all the more terrific, for who cares for a blow while stimulated by fury?

I have found some "hard cases" to deal with, but completely cured them all with a single exception. There was one old cow, so terrific in the blows she dealt out, that none dare attempt her with a pail, till her legs had been strongly secured, which was done with great difficulty. She never kicked, after I had given her the second milking, in the way I have just stated, but became perfectly mild, quiet, and gentle, having doubtless been made vicious by bad management. The case which I could not cure was a large, uncommonly knowing cow, who was wise enough never to kick when *I* milked her, consequently I could not apply the remedy, but was savage enough to other milkers. With regard to cows running about,—I once knew a cow quite troublesome in this particular, usually upsetting the pail of milk, before commencing a race. The boys chased her round the pasture till they cornered her, and then lashed her vigorously. As a consequence, she took care not to be cornered next time, and hence became intractable in the extreme. To cure her, she was placed in a moderate-sized yard, and driven gently into a corner. When she ran, the whip was applied, but with only one blow at a time, till she regained the old corner, where every means was used to quiet her. In this way she soon found an intimate connexion between whipping and running, and that comfort consisted in sticking to her post. On the third day she was handed over to the care of the hired man, and ever after was a quiet cow.

It is almost needless to add that this mode of treatment requires perfect calmness, patience, and self-possession. When you feel passion or fear, the animal soon discovers it, and she feels no longer the influence of a superior being. Therefore those who cannot carry out the system properly, had better not try it.

An Old Milker.

Shallow Plowing and Surface Manuring.

We make the following extract from a letter from a Maryland subscriber:—If you looked at the Farmer, you saw I got the first premium for wheat and corn—Wheat 41 bushels per acre—Corn 63 bush. per acre—and for plowing, at our cattle show in 1847. I had taken some pains to prepare the lot for the wheat, and as I stand nearly alone on shoal plowing, I was the more particular. I prepared a part of the lot with *Sinclair's* 3-mould plows, and the common drag harrow, and have never seen as good White wheat in the winter, during my farming; and nearly every one that has seen the wheat, which I have growing from 22 bush. seed, has pronounced that they hardly ever saw as good in the winter; few crops look well in our part of the country; I have seen but 2 or 3 in my travels. I am well satisfied, if surface manuring is true, which I think will not be denied, that to keep the richest portions of your earth nearest the surface, must be the true interest of every farmer. I find that all men who give their manure to the top of the land, when in grass, will not hesitate a moment to say that they prefer the plan of putting their manure on top; that is to say on grass the year before they cultivate, or on the land after they have broken it up in the spring for corn, or as a top-dressing on wheat, after seeding; all of which must be rotted manure, except for corn, or there will not be the same benefit.

In the year 1834 or 1835, I ordered my driver to take to my corn lands, manure ten with rotted manure before plowing, and ten after planting; also ten with unrotted before plowing, and ten after, and alternate them, to see which would produce most corn—land equally good. After the corn got three feet high, I told him to have it suckered. I inquired if he found any difference; he informed me the rows manured on top had four or five times as many suckers, which was the first thing that gave me the idea of top-dressing land. I regret I did not gather and measure; but I forgot to give the order.

I shall continue to plow from two to four inches, and I think if I have as good luck as I have had, that I shall not change, though I shall give some efforts in good land a little deeper. One thing I will mention: if you will take a deep, rich black mold, and take off one or two inches from a few lands, and put it in another place, you may put what you please in land, and nothing will grow equally good as in the rows which are in their natural state; but do you continue the manure, and after some years exposure they will come to produce well. So in this case, I draw the inference that sun and light are *first* all important. I like to go down with such implements as will not take down the top or bring up the bottom, and for this reason, in excessive hot weather the roots of plants desire to protect themselves from the heat, and in very wet weather I like the water to have a chance to settle quick.

Interesting Experiments.

Adam Clark, of Milo, Yates county, N. Y., in a communication to the Gen. Farmer, gives the result of an experiment, which is worthy the attention of all wheat raisers. Four pieces of ground, each 2 feet square, of finely prepared ground, were planted with wheat, a grain each at the intersection of straight lines drawn across each plat. The experiment and results we have condensed in the following table:

	No. 1.	No. 2.	No 3.	No. 4.
Distances of seed asunder,...........	1½ in.	3 in.	4 in.	4 4-5in
Number of grains planted,...........	289	81	49	36
Number of grains that grew,.........	203	60	40	30
Number of heads, ...	286	136	112	104
Average number of grains per head,..	26	35	39	42
Whole number of grains,.............	7458	4765	4452	4399
Yield per acre in bushels,............	108	69	64	63
Seed per acre, in bushels and pounds,	4 bu. 12 lbs.	1 bu. 10 lbs.	42¾ lbs	31½ lbs

Fat Animals.

The Centre market at Albany presented a display of very fine beef, mutton and pork, on the 22d of February.

At the stall of Mr. **Kirkpatrick** was the beef of a heifer, in relation to which, as she was considered a very superior animal, we have thought proper to collect some particulars. Mr. **Wm. J. McKown**, of Waterville, Oneida county, who fattened her, states that she was raised by Mr. **Wm. Hays**, of Sangerfield, in the county before mentioned, and was calved the 27th of March, 1844. That she was got by a full blood Durham bull from Mr. **Weddle's** stock which was sent by **Barnabas Allen** of Wayne county, to **Stephen Leonard** of Sangerfield. That her dam was got by a three-fourths bred Durham bull, from Mr. **Weddle's** stock, bred by Mr. **Spear** of Palmyra; her grand-dam a "native mouse-colored" cow, said to be of an excellent *family*. The heifer never bred. Her dam has produced several other calves, all of which have been killed for veal, and were remarkable for their fatness and symmetry. The sire of the heifer was chiefly noted for the value of his progeny for dairy purposes—his owner, Mr. **Leonard**, having raised several cows by him, that were superior milkers.

The heifer was raised in the ordinary way, (not allowed to suck,) and had milk but for a few weeks. She attracted no particular attention till the fall after she was two years old, when she had become so fat on grass, that it was determined to sell her for beef. Mr. **McKown** bought her the last of September, 1846, intending to slaughter her in a few weeks; but on feeding her for a short time with pumpkins, she gained so rapidly and showed such a strong propensity to fatten, that it was resolved to keep her a longer time. From the first of January, 1847, she had two quarts of meal per day, till the first of October; being fed in other respects like the dairy cows. with which she ran. From October till she was slaughtered, she was full fed with pumpkins, carrots, and corn and cob meal. She was killed on the 19th of February, 1848, at which time her weight was as follows: Live weight—1492 lbs. Dressed weight—quarters, 984, tallow 157, hide 67=1208 lbs.*

At the stall of Mr. **James McQuade**, was the beef of a fine pair of twin cattle, fattened by Mr. **Sherman Bassett**, of North-East, Dutchess county. They were four years old, (coming five this spring,) were said to have been raised in Connecticut. They were called of "native" breed. Their color was a handsome brindle; but their shape and general character, strongly denoted a strain of Devon blood. They had been fed about a year, but the particulars of feeding we did not learn. Their dressed weights were as follows: *Near* ox, quarters, 1062, tallow 188, hide 80=1330 lbs. *Off* ox, quarters 1072, tallow 180, hide 84=1336 lbs.

Mr. D. **Mahoney** had the beef of four very good oxen, fattened by Mr. C. **Leach**, of Madison county. We only obtained the weights of the quarters of these cattle, those of one pair of which weighed 2746 lbs., and of the other 2304 lbs.

Mr. J. **Featherly** had the carcass of an extraordinary calf, fattened by Mr. **Woolford**, of Albany. It was a few days less than three months old, and its dressed weight was 302 lbs. It was a mixture of Durham and Devon blood.

A very large and well shaped hog was shown at the stall of Mr. **Geo. Schwartz**; it was said to be but eighteen months old, but it weighed, dressed, 728 lbs.

Mr. **Kirkpatrick** had the carcasses of seven Leicester sheep, fattened by **Harry Felt**, of Madison county, the dressed weights of which were from 88 to 115 lbs. The saddles of most of these were sold to go to Virginia, and brought about twelve cents per pound. Mr. **McQuade** had also some very fine mutton, but we did not learn the weight.

Agricultural Discussions.

In our last, we gave a brief sketch of the discussions which have taken place at the weekly meetings held at the Capitol in this city. The subject of the culture of fruits was taken up at the fifth meeting, and occupied two evenings. The meetings were fully attended, and the discussion elicited remarks from many cultivators and amateurs. We shall endeavor to find room for a more extended notice of this discussion in a future number. The following resolution was unanimously adopted:

Resolved, That we deem it most for the interests of farmers, mainly to cultivate approved varieties of fruit of our own country; and that we approve of the varieties recommended by the State Agricultural Society, at the annual meetings of 1847 and 1848, and commend them to the notice of cultivators.

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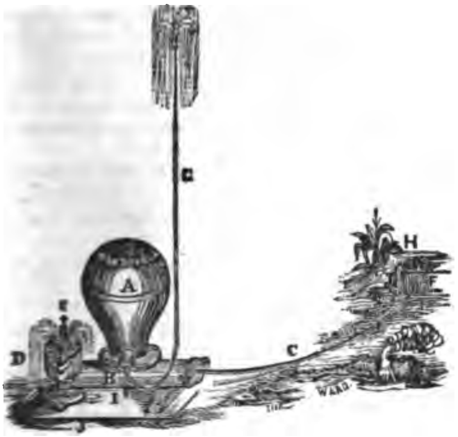
* There is a table which was published several years since in England, for ascertaining the dressed weight of cattle by external measurement: The girth of the beast is taken at the smallest part, immediately behind the fore legs, and the length from the point of the shoulder to the end of the rump. From these measurements, the table purports to show the weight of the beef, or four quarters. We are not aware that the table is much used in this country. Its correctness appears to be doubted. Some contend that it gives too much, and others that it gives too little dressed weight in proportion to the dimensions. The heifer was tried by this rule. Her length from shoulder to end of rump was 5 ft. 2 in. and her girth 7 ft. 4 in. According to the table, her quarters would have weighed 946 lbs. Their actual weight was 984 lbs. But as this animal was of uncommon fatness, and her flesh of unusual thickness, she can hardly be deemed to form a fair test of the correctness of the table, which for cattle in general, it is by no means improbable, is sufficiently accurate.

The next discussion related to the manufacture of Butter, &c. Mr. JOHNSON, the secretary of the Society, gave some very valuable and important information in regard to the quantity of butter manufactured in the different counties of this State—the qualities of the different kinds of salt used—and the course pursued by our government in making contracts for the supply of butter for the army and navy. Mr. J.'s remarks will appear in the *Transactions*, and we shall take the earliest opportunity to put our readers in possession of some of the important facts which he has collected.

Improved Hydraulic Ram.

The annexed cut represents W. & B. DOUGLASS' Improved Hydraulic Ram, manufactured at Middletown, Conn., for which a silver medal was awarded by the American Institute, October, 1847, and also a premium by the Middlesex County (Ct.,) Ag. Society, October, 1847.



H spring or brook. C drive or supply pipe, from spring to ram. G pipe conveying water to house or other point required for use. B, D, A, E, I, the ram. J the plank or other foundation to which the machine is secured.

Water-rams, variously constructed, are fast coming into use, and with great advantage. We copy the following description of them from the Middletown, Ct., Constitution:—" Its object is to raise water above its natural level, which is done by a simple hydrostatic principle. If a bar of iron be made to stand upright, it will press with its whole weight on the point on which it rests; but if a column of water be poured down a perpendicular tube, it exerts a force not only downward but laterally, so that it would have a tendency, if the tube was closed at the bottom, to expand at the bottom of the tube into a globular form, by pressing on each side equally. If the tube be very long it must be capable of resisting a great pressure at the lower end or it will burst. If now a smaller pipe be made to connect with this tube at the bottom, and a stop cock be placed at or near the point of junction, the pressure of the water will be very great at the place where the stopcock is. If the cock be suddenly opened, so great is the pressure that a jet of water will rise in this pipe to a considerable distance above the top of the other pipe. If the cock be opened and shut successively, a continuous stream is obtained from the smaller pipe. This is the simple principle of the Water-Ram. Messrs. W. & B. DOUGLASS in this city, are manufacturing a very perfect article, which takes but little room, acts with great force, and seldom gets out of repair. It has obtained quite extensive use among the farming community. Springs of excellent water, before of no utility because at a distance from where they might be used, and at too low a level for ordinary conveyance through pipes, are now brought into requisition for household purposes, for watering cattle, and also for irrigating lands." [See advertisement.]

Lawrence Scientific School.

This Institution forms a department of Harvard University, Cambridge, Mass.—a department endowed by the munificence of the Hon. ABBOT LAWRENCE. The second term commenced on the 25th of February last. From a circular forwarded us by Prof. HORSFORD, we learn that instruction will be given under the following heads:—1. *Chemistry*, under the direction of Prof. HORSFORD, who will receive special students in chemistry, they giving their attendance in the laboratory for such time as shall appear to be necessary. In the course of the term Prof. H. will deliver a full course of lectures on theoretical and practical chemistry. 2. *Zoology and Geology*. Prof. AGASSIZ will deliver a course of lectures " on the History of the earliest Geological Ages," followed with an account of the earliest known condition of our globe, and the changes it has undergone up to the present period. The regular lectures in future will consist alternately of zoology and geology. Prof. AGASSIZ will afford students access to his laboratory, in order that they may learn how to observe isolated facts, and how to conduct investigations in a proper manner. He will also make excursions in the country with the students during term-time. 3. *Engineering*. This department will be brought into operation as soon as practicable.

The following courses of lectures delivered to undergraduates will be open to members of the Scientific School, viz:—A compendious course on *Mineralogy* and *Geology*, by Prof. WEBSTER. A course on *Systematic Botany according to the Natural System*, by Prof. GRAY. A course on *Natural Philosophy*, by Prof. LOVERING. A course on the *General Outlines of the Classification of the Animal Kingdom, and on comparative Anatomy and Physiology*, by Prof. JEFFRIES WYMAN.

We learn that the new Chemical Laboratory and the building for the department of Engineering are in progress of erection. It is expected that the former will be ready for occupation by September next. The formation of a Museum of Natural History, on an extensive scale, will be immediately commenced under the superintendence of the professors in the several departments. The Mineralogical Cabinet of the University, the Rumford and Philosophical Apparatus, the Anatomical Museum, the Botanic Garden, the Observatory, and the Public Library, will be accessible to the students of the Scientific School.

Further information on all subjects connected with the school, may be obtained on application to Prof. E. N. HORSFORD, Dean of the Faculty.

CUBIC FEET AND BUSHELS.—Divide the number of cubic feet by 1-6, and the result will be heaped bushels—applicable to apples, potatoes, &c. Multiply the cubic feet by the fraction 4-5, and the product will be stricken bushels.

LAWSUITS.—The Chinese call going to law, " losing a cow to win a cat." With us it is often losing the cow without winning the cat.

AN OLD AND GOOD MAXIM FOR DRIVERS:

Up hill urge me not,
Down hill press me not,
On the plain spare me not,
In the stable forget me not.

Answers to Inquiries.

Back Volumes of the Cultivator.—In answer to several inquiries, we state that we can supply orders for any or all of the back volumes of "The Cultivator." The first series, consists of ten vols. quarto, price, stitched, $1 per vol. New series, four vols. now complete, stitched, $1 per vol. The usual discount to agents. These vols. can any of them, be always obtained, bound or unbound, of our agents in New-York, Messrs. M. H. Newman & Co., booksellers, 199 Broadway.

Manner of spreading Lime.—E. H. O., Petersburgh, Va. Lime is sometimes taken from the kiln in carts, laid on the field in small heaps, and covered slightly with earth; in which situation it remains till it has slaked and become thoroughly fine, when it is spread with a shovel. In other cases, it is allowed to become considerably slaked before it is carted, and is spread over the field immediately from the cart.

Composition for Grafting.—S. F. C., Philadelphia. See an article under the horticultural head in our last number.

White or Ox-Eye Daisy.—(*Chrysanthemum leucanthemum.*) L. S., Fredonia, N. Y. The seeds of this plant will vegetate after having passed through the bodies of horses or cattle, and it would not, therefore, be advisable to use manure made from hay which contained the seeds, unless great care was taken to destroy the plants as soon as they could be readily found.

Quantity of Carrot seed for an acre.—A. F., Hudson, N. Y. The quantity of seed required for an acre, depends on the width between the rows; the usual width is about sixteen inches; and when sown with a good machine, about one pound is sufficient for an acre. It may be had at the Albany Agricultural Warehouse, at a dollar and twenty-five cents per pound.

"Do Oyster-shells contain Posphate of Lime?" D. G. Washington, D. C. The quantity of posphate of lime is very small, not exceeding one per cent. They, however, form an excellent application for fruit trees, on many soils; but if the posphate of lime is especially required, it would be better obtained by the use of bones. The bones or shells would be more immediately useful if they were reduced to small pieces.

Work on Goats.—J. W. O. We do not know of any separate work on goats. They are spoken of in several works on agriculture; and Loudon describes the various domesticated species, and their uses.

Lead pipes for water.—The inquiry is often made whether lead pipes or tubes used for the conveyance of water, impart to the water any injurious quality. The conclusion generally prevails, among those who have investigated the matter, that lead is not entirely safe, so far as regards the purity of the water. Dr. Holmes, in a late number of the *Maine Farmer*, has given an article on this subject, from which we gather the following: that perfectly pure water in lead, causes the formation of an oxide of lead, which dissolves and the water becomes poisonous: that all the salts of lead are poisonous when taken into the stomach: that the oxides readily form combinations with acids and alkalies, which are deleterious to those who may swallow them, whether in solution or otherwise.

Sometime since we received an inquiry in relation to the cause of the decay of lead pipe, when placed in the ground and used for conveying water. It was said the pipes soon became thin, that holes were formed in them which rendered them worthless. By the above reasoning, it may be seen that the decomposition of the pipe may be owing to its oxidation from the action of the water, its particles becoming dissolved and carried away by the current.

Clay Pipes for Draining.—C. A. K. Parma Centre, N. Y. We are not apprised of clay pipes of the kind described by Prof. Norton, being made in this country; but we are informed that measures have been taken to introduce a machine by which they are made, and commence the manufacture of them.

Sowing Buckwheat with Wheat.—T. H., Colchester, Canada West. We cannot see how the ravages of the Hessian fly can be prevented by buckwheat being sown with wheat. We can imagine no quality in the buckwheat that would repel the fly and certainly the fly could not live in the buckwheat. We should therefore, attribute the exemption of the crop to which you refer, to accident, and not any influence of the buckwheat.

Downing's "Fruit and Fruit Trees."—J. H., Ottawa, Ill. The price of this work, with colored plates, is $15; that of the common edition, $1.50. The latter contains the outline figures of fruits, but no plates.

Osage Orange.—M. D. Jr., Lynchburgh, Va. The seeds of this plant are advertised by M. B. Bateham, Columbus, Ohio, at $2 per quart. We do not know of any *new* seed for sale here. Abundance of young plants may be had in this vicinity at $12 per thousand.

Cotswold and Leicester Sheep.—L. F., Waynesboro, Va. We cannot say who has sheep of these breeds for sale in this neighborhood. Persons who have them would do well to inform us.

J. F., Urbana, O. We can send any of the back vols. of the *Cultivator* in sheets, without stitching.

Cheese.—In answer to various inquiries, we will give an article on this subject next month.

Ide's Cultivator.—In answer to an inquiry made sometime since in regard to this implement, Mr. Nathan Ide writes us that it will effectually destroy "wire grass," Canada thistles, and other noxious plants, if it is properly used. He states that he has now a good wheat field, where the wire grass had entire possession a few years ago—it is now perfectly clean.

"White Black-berries."—Mr. Geo. A. Mason, of Jordan, N. Y., informs us that this kind of fruit is quite common in his neighborhood.

Supposed injury to hogs by Buckwheat.—Mr. S. Ruckman, of Highland county, Va., writes us that he lost several hogs last fall, while they were feeding on the "tailings" left after cleaning buckwheat, and he wishes to know whether the experience of others would justify the belief that the hogs died in consequence of any injurious effects from the substance mentioned. We should like to hear the remarks of others, but in the mean time would observe, that we should be inclined to attribute the injury to the *dust* which the hogs probably inhaled while working over the refuse. We have known similar results from hogs being allowed access to the chaff of oats, barley and rye.

Price of Guano.—W. H., Machias, Me. We understand the price of guano in Boston, would be from three to five dollars per hundred, according to quality.

Bones with Sulphuric acid.—W. H. We have not heard of bones having been prepared with sulphuric acid in this country; but in England they are much used for manure when decomposed in this way, and for *immediate* effect are considered better than when only crushed.

Other inquiries will be answered next month.

India Rubber Horse Collar.—This is a new invention, consisting of India rubber inflated with air. It is said to fit easier on the horse's neck than anything yet made.

In *New South Wales*, according to foreign papers, more than 350,000 cattle and sheep have, within the last two years, been boiled up for their tallow.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from C. F. Wells, C. E. G., Andrew Bush, S. W. Jewett, C. W. Mulford, Claudius Allen, Thomas Andrews, Vermont Subscriber, F. Holbrook, E. D. Andrews, J. Hildreth, E. D. Pierson, Dan. Gold, L. S., Jona, Bowers, Wm. R. Prince, Nathan Ide, Chas. Betts, Dean, James Otis, F. E. Stowe, James Jenkins, E. M. Hoyt, A Subscriber, I. Hildreth, W. Ansley, C. E. Goodrich, David Sinclear, Jr., Thurston Wood.

Books, Pamphlets, &c., received since our last, as follows: A Universal History of the most remarkable events of all nations, No. 1, and The Children at the Phalanstery, a familiar Dialogue on Education, by F. Cantayrel, from the Publisher, W. H. Graham, New-York.——Public Documents from Hon. J. I. Slingerland.——Address of Prof. Shepard before the Agricultural Societies of Hampshire, Franklin and Hampden counties, at their last Fairs, from Sidney Chapin, Esq.——Report of the Ohio State Board of Agriculture, for 1847, from M. B. Bateham, Esq. Ed. O. Cultivator.——Illustrated Life of Gen. Scott, from the publishers, A. S. Barnes & Co. N. Y.——Transactions of Trumbull Co. (O.) Ag. Society, for 1847, from F. E. Stowe, Esq.——Agricultural Reports of the Rhode Island Society for the Encouragement of Domestic Industry, from Jno. Wilson Smith, Esq.——The Northern Whig, Belfast, containing the annual report of the Royal Society for the promotion and improvement of the growth of Flax in Ireland, from Mr. John Roberts.——Report of the Trustees of the N. Y. State Library for 1847.——Report on Plank Roads to the Council of Wisconsin, by Hon. P. White.

☞ The gentleman who purchased a copy of the Transactions of the N. Y. S. Ag. Society, at the office of the Cultivator, on the 28th of February, will have $2 returned to him if he will furnish us with his address. The boy who sold it, made a mistake of $2 in the price.

New-York State Agricultural Society.—The premium list for the present year has been published. It is on a more extended scale than any heretofore offered by the Society—the amount of the premiums being upwards of $6000. We had intended to have published the list in our present number, but in the crowd of articles that is pressing upon us, it is impossible to spare so much room as the list would occupy. It has been published in one or more of our city papers, and copies may be had by application to the secretary, B. P. Johnson, Esq., Albany.

The next exhibition, as we have before stated, is to be at Buffalo; and we are pleased to learn that the citizens of that city and vicinity are already engaged in making the most liberal provisions for the occasion; both as regards the accommodation of visitors, and the means for forming the largest and most interesting show ever held in the State.

Ball Seminary.—An advertisement in regard to this institution will be found in this number, to which we would call attention. The school has been in operation for several years, and from the information we have received, and our acquaintance with one of its principal founders and managers, we have great confidence in its character and usefulness. It will be seen that arrangements have been made to give instruction in reference to agriculture and the arts, in the form of lectures illustrated by apparatus and experiments. This department will be under the charge of Hon. L. C. Ball, a gentleman who has been for two years engaged in chemical investigations in the laboratory of Prof. Emmons, and who, to eminent scientific knowledge, unites sound practical judgment. He is fitting up a proper laboratory, for the analysis of soils, rocks, plants, &c., to which the students of the school will have access. In connection with instruction in reference to the principles of chemistry and geology, Judge Ball will give, also, such practical information in regard to the details of husbandry, as will be calculated to render his pupils *successful farmers*. The seminary is located in a pleasant neighborhood, distinguished for its healthfulness, beauty of scenery and fertility.

Fine Mutton.—We acknowledge the reception of two legs of excellent mutton, from Mr. J. McD. Mc Intyre, of this city. Mr. McI. has been for some years distinguished as a breeder of superior Cotswold and South Down sheep, and has been a frequent and successful competitor for the prizes of the New-York State Agricultural Society, and the American Institute. His fat sheep have been for a few years past, mostly sold to feed the epicures of Boston, and have brought an average price of from eight to ten dollars per head. He lately slaughtered two fine sheep, two years old, a cross of the Cotswold and South Down, which weighed dressed, with the head on, 110 and 100 pounds. Mr. Mr. McI. has only bred a few sheep of this cross for an experiment; but so far, he has found them to fatten with greater rapidity at an early age than any others.

Superior Apple.—Mr. Ambrose Stevens of New-York, lately left with us a specimen of a variety of apple obtained by him in Washington, D. C., and called there the "*Virginia Pippin.*" It was grown, as Mr. S. understood, in the valley of the Rappahannock. It seems to us an apple of very excellent quality—not inferior to any within our knowledge. We defer for the present, a particular description; and would be greatly obliged to any of our Virginia friends, if they would tell us any thing in regard to the origin of the apple, (or one known by this name,) and the estimation in which it is held where known.

Large Sheep.—In our October number for last year, we noticed a couple of long-wooled rams exhibited at the State Fair at Saratoga, by Mr. C. B. Reybold, of Delaware city, Del. Mr. R. informed us at Saratoga, that the weight of his rams, at the last time they were weighed, was 320 and 288 pounds. In a letter received from him under date of February 22, last, he says: "I weighed the two old rams this morning. They weighed 344 and 288 pounds."

The Horse "Norman" or "Morse's Grey."—This horse, so well known as the sire of fast trotters, and valuable carriage and road horses, has changed owners. He has been purchased by Mr. I. T. Grant, whose advertisement will be found in the present number. We have no hesitation in saying that mares sent from a distance will receive all proper care and attention.

Curing Hay.—Mr. Charles Betts, of Redford, Mich., writes: "I learned from the Cultivator how to cure clover hay in cock. Taking the hint, I adopted this plan in curing all hay—timothy, red-top, &c.—and it is now almost as green as when cut. It has a sweet odor, and does not smoke when it is stirred."

Multicole Rye.—All the accounts of which we have heard concerning the produce of this kind of grain in this country, represent it as far preferable to the common rye. William Massie states, in the *Southern Planter*, that he obtained half a gill of it in 1845, from which he obtained, the first year, just one bushel. This bushel was sown in 1846, on an acre and three-fourths of ground, and produced forty-five and a-half bushels. The soil was of only medium quality in both cases, and received no manure. He thinks this variety of rye will prove a very valuable acquisition to the rye growing region of Virginia—the common rye having ceased to be valuable there. Five-eighths of a bushel, he thinks is enough to sow on one acre, as it tillers very much.

Stilton Cheese.—At a late meeting of the Executive committee of the N. Y. State Ag. Society, the president, L. F. Allen, Esq, presented a specimen of this variety of cheese, manufactured by Mr. Henry Parsons, of Guelph, Canada West. It was pronounced by all who examined it, of superior quality.

Fat Cattle.—A lot of thirty-four beef-cattle, owned and fattened by Col. J. M. Sherwood, of Auburn, passed through this city on their way to Brighton market on the 20th ult. They were a prime lot, and several of them were of extraordinary fatness. The live weights of some of them were as follows:—1 pair oxen 6 years old, 2,170 and 2,336, equal to 4,506 lbs.; 1 pair 6 years old 2,100 and 2,040, equal to 4,140 lbs.; one pair 5 years old, 2,012 and 2,106, equal to 4,118 lbs.; one cow 6 years old, (very fat,) 1,708 lbs. Most of these cattle were grade Durhams—the cow was half-blood—got by Col. S.'s bull Archer. There was a pair of very handsome grade Devon steers—nearly full blood. The lot comprises about one-third the number fattened by Col. S. the past winter—the remainder will be taken to market soon.

Norman Horse Louis Philippe.—Mr. R. B. Howland, of Union Springs, Cayuga county, N. Y., has lately purchased this young stallion. He was bred by Edward Harris, Esq. of Moorestown, N. J., and was foaled in 1843. His sire ("*Diligence*,") and dam were imported from France by Mr. Harris. He is a very staunch colt—close-jointed, with very large sinews and well developed muscles—and his parts form a general combination indicative of great strength and power. His girth immediately behind the withers is 6ft. 3in.; measure round the hock twelve inches; below the knee ten inches. His weight, on the scales at the depot at the Boston Railroad, was 1120 pounds. We think this animal is calculated to produce a useful stock of horses for farm use, and we trust Mr. Howland will be remunerated for the great expense and trouble he has incurred in procuring him. We expect to have a cut and more particular description of this horse in our next number.

☞ Breeders of Horses in Central New-York, are referred to the advertisement of the Morgan Horse "Gen. Gifford," in this number.

Preservation of the Tomato.—Several correspondents request information in regard to the best method of preserving the tomato, in such a manner as to retain the greatest amount of its natural taste and virtues. We should like to know what methods have proved best.

Connecticut Pigs.—A Connecticut paper states Ralph R. Phelps, Esq., of Manchester, sold six pigs last spring, the average dressed weight of which, at an average age of nine months and nineteen days, was 378 2-3 lbs. The separate weights were as follows: one at nine months and a half, weighed 345 lbs; two at ten and a-half months, 700 lbs.; one at nine months, 375 lbs.; one at nine months and fourteen days, 412 lbs.; one at 9 months and thirteen days, 440 lbs.

Good Crops of Corn—Mr. Wm. Bean, of Jeffersonville, Pa. informs us that John Miller, of that neighborhood, raised last year, 94 bushels of corn per acre, and that others in the vicinity raised from 60 to 80 bushels per acre. He says—"a spirit of emulation has been awakened among us, and a general benefit will result to the agricultural community in this district."

Fat Sheep.—We learn that thirty-six sheep, fattened on the farm of Messrs. Goodyear, in Cobleskill, Schoharie county, sold for $380—or $10.55 per head.

French Guano.—A sample of the French Guano, advertised by Mr. Bommer, may be seen at this office. Mr. B. proposes to establish a manufactory of this manure in New-York.

Quick Growth.—The *Mass. Plowman* states that Mr. H. Joy, of Townsend, Vt., lately brought to Boston a pig, seven-eighths of the Suffolk breed, six months and eight days old, which weighed in Fulton market, *three hundred and two pounds*.

☞ Quite a number of communications, intended for this number, are unavoidably laid over to next month.

Notices of New Publications.

Report of the Ohio State Board of Agriculture.

We are indebted to M. B. Bateham, Esq., for a copy of the Second Annual Report of the Ohio State Board of Agriculture. It affords evidence that the agriculture of Ohio is steadily improving. The crops of last year, with the exception of wheat and potatoes, are represented as having been unusually abundant, and having been sold at remunerating prices. The wheat crop of 1847 is reported as one-fourth to one-third less than that of 1846, but the quality of the last year's crop is spoken of as superior. Indian corn is reported as a very large crop—much larger than usual. The Cincinnati *Chronicle*, in reviewing the report, estimates the wheat crop of 1847, at 16,000,000 and the corn crop at 55,000,000 for the entire State. Potatoes suffered from the disease and the general crop was light. The report states that no useful conclusion has been reached in reference to the disease, except that early planting has proved most successful.

The number of sheep in the State, according to the returns from the different counties, is 1,071,037; and it is computed that there were exported from the State in 1847, 1,933,435 pounds of wool.

The export of cheese from the State, was chiefly from five counties—Trumbull, Portage, Geauga, Madison and Ashtabula, and the amount from these was 11,450,000 lbs. The export of butter from nine of the principal dairy counties, is put down at 1,020,000; and the *Chronicle* estimates the export for the whole State, at 4,000,000 lbs.

The Architect; a series of Original Designs for Domestic and Ornamental Cottages, connected with Landscape Gardening, adapted to the United States; Illustrated by Drawings of Ground Plots, Plans, Perspective Views, Elevations, Sections and Details. By W. H. Ranlett.

Our readers will recollect a previous notice of this work, while the first volume was in course of publication. That volume is now completed, and the first number of the second is before us. It is a beautiful and highly useful work, and is calculated to be greatly beneficial in the dissemination of correct architectural information. The conductor remarks that "the work is intended as much for the million as for the wealthy few." He adds,—"Men of moderate circumstances and the really poor have been so long accustomed to plain, uncomfortable houses, that beauty and convenience have come to be regarded as solely the right of the wealthy and independent. We trust that something has already been done in the preceding numbers of this work to dispel such a degrading delusion. The humblest cottage should in beauty of form and convenience of construction, be equal to the finest villa, and the laboring man may, without extra expense, be sheltered by a roof constructed upon the same principles of architectural beauty as that which shelters his wealthy employer. As the sun shines, the rain falls, flowers blossom, the stars twinkle, and birds sing for all, so are the discoveries of science and the progress of art for all. If it were the sole purpose of the architect to construct showy houses for the rich, and if his arts were not to be employed in embellishing the dwellings of the poor, as well as in rearing splendid churches and spacious mansions, his noble profession would lose half its dignity."

The **Architect** is published monthly at the Tribune Buildings, New-York, at fifty cents per number.

The Western Journal of Agriculture, Manufactures, Mechanic Arts, Internal Improvement, Commerce and General Literature.

We have received two numbers of a publication with the above title, published at St. Louis, Mo., by M. Traver and T. F. Risk. The design of the work is expressed by its title. The numbers before us contain several able and valuable articles. It is published monthly, at $3 a year in advance.

Ewbank's Hydraulics and Mechanics.

The second and third parts of this work, now in course of re-publication by Greely & McElrath, are in good style. The engravings are neat, and afford good illustrations of the purposes for which they were designed. Considerable attention is now being given to the subject of hydraulics, and those who are interested in this branch of science would do well to purchase this work. The price is twenty-five cents for each number, which contains eighty pages.

Fifteenth Annual Report of the State Lunatic Hospital, at Worcester, Mass.

The amelioration of the condition of the insane, must afford pleasure to every benevolent mind. The increase and diffusion of the spirit of philanthropy, is perhaps, in no way more conspicuous, or its results presented in a more gratifying manner than in the improvements which have been made in the management of this unfortunate class of mankind.

The Institution at Worcester, is one of the largest of the kind in the country, and its excellent condition, under the supervision of Dr. Chandler, as well as under his predecessor, Dr. Woodward, has been the subject of frequent praise. The report is ably drawn up, and presents the details of the management of the Institution in an interesting manner.

The Agriculturist and Canadian Journal; a consolidation of the British American Cultivator and the Canada Farmer.

We have received the first number of the above work, which is to be published semi-monthly at Toronto, by R. Brewer & Co. Terms one dollar a year in advance. The work has a very respectable appearance, and we trust it will meet with a liberal patronage from our Canadian brethren.

American Journal of Science and Arts.—The number of this able work for March is before us. Among its contents we notice an article on the "Production of Light by Chemical Action," by Prof. Draper; "Parallelism of the Palæozoic Deposites of North America, with those of Europe," by Verneuil, translated by Prof. James Hall. "Notes upon the Drift and Alluvium of Ohio and the West," by Charles Whittlesy. An article from Dr. Hare, of Philadelphia, on the Theories of Electrical Phenomena. Chloroform, by B. Silliman Jr. Proceedings of the American Association of Geologists and Naturalists, at Boston, September, 1847. Abstract of a Meteorological Journal kept at Marietta, Ohio by Dr Hildreth. The high character of the Journal as a scientific work entitles it to a liberal support. It is published at New-Haven, every second month, at $5 per year. Conducted by Professors Silliman & Dana.

Agricultural Journal, and Transactions of the Lower Canada Agricultural Society.

This is a monthly periodical, which was commenced in January last. It is designed as the organ of the Lower Canada Agricultural Society, a spirited and able association, incorporated in 1847. The numbers of the Journal which we have received, are well filled.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, March 18, 1848.

FLOUR—Genesee per bbl. $6.75—Ohio and Michigan $6.69.

GRAIN.—Wheat, Genesee. per bu., $1.50—Ohio, $1.40—Corn, northern, 55a56c.—Rye, 80a82c.—Oats, 48a50c.—Barley 80a90c.

BUTTER—Orange County, per lb., 20a22c.—Western, dairy, 16a18 c.

CHEESE—per lb., 6a7½c.

BEEF—Mess, per bbl., $8.12½a$9.—Prime $5.12½a$6.

PORK—Mess, per bbl., $10.12½a10.25—Prime, $9.50.

HAMS—Smoked, per lb., 7½a9c.

LARD—Per lb., in kegs, 8 3-8a8½c.

HEMP—Russia clean, per ton, $225a$230.—American dew-rotted, $120a$140.

HOPS—First sort, per lb., 5½a6½c.

COTTON—New Orleans and Alabama, per lb., 6½a10c.—Upland and Florida, 6½a8½c.

WOOL—(Boston prices.) March 18.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,..................	40a45	"
" three-fourths blood fleeces,.........	35a38	"
" half blood do	32a33	"
" one-fourth blood and common,.....	28a30	"

The steamer Cambria arrived at Boston on the 18th inst., having English papers to the 28th February. The markets for breadstuffs and American provisions were dull, and without much change from previous dates. The news has not effected our domestic markets.

APRICOT TREES FOR SALE.

THE subscriber has 5,000 trees of his Early Golden Apricot for sale this spring. The trees are of good size, smooth and thrifty. Also a general assortment of Fruit Trees, and a large quantity of Isabella Grape Vines.
CHARLES DUBOIS,
March 14, 1848—1t. Fishkill Landing, New-York

HOPE-TOWN OATS.

FIFTY bushels Hope-Town Oats, raised expressly for the Ag. Warehouse and Seed Store, from seed imported the past season by the proprietors. They are much earlier than the ordinary oats raised here, ripening when sown side by side some two weeks in advance—yield well, and the kernel is large and heavy. Price, $1 per bushel.

For sale at the Albany Ag. Warehouse, Nos. 10 & 12 Green-St., Albany.

PRINCE'S LINNÆAN BOTANIC GARDEN AND *Nurseries, Flushing, New-York.*

WM. R. PRINCE & Co., successors of Wm. Prince, and sole Proprietors of his great collection of Fruit Trees, &c., will transmit their new Catalogues (36th edition) to all post-paid applicants who desire to purchase. Also their new Wholesale Catalogues to all Nurseries. This immense collection is unrivalled in Europe or America. The Fruit and Ornamental Trees are of the largest sizes for planting, except a few new kinds of but recent introduction. Extra large sized Trees can be supplied of the Ornamental kinds from twelve to twenty feet, and extra sized Fruit Trees of most kinds, including *Ten Thousand* Standard and Pyramid Pears, *in a bearing state*, the former eight feet with heads, and the latter 3 to 4 years from the graft. Peaches at very reduced rates. Evergreens by 100 to 1,000, at low rates. Apples 3 to 4 years from the graft. A great supply of Cherries, Plums, Quinces, Spanish Chestnuts, Native and Foreign Grapes, Fastolf and other Raspberries, Gooseberries, Currants, Strawberries, Rhubarb, Asparagus, &c. 30,000 Hawthorns, and 50,000 Honey Locust, for hedge, 2 years, at $5.—Osage Orange, Buckthorns, &c.

All are at reasonable prices compared to the quality of the articles, and will be packed in a manner to insure success.

April 1—1t.

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city.

April 1—tf.

COMMERCIAL GARDEN AND NURSERY OF PARSONS & CO.,

Flushing, near New-York.

THE planting season being near at hand, the Proprietors now offer for sale in addition to their usual assortment, many new and choice varieties of Apples. Pears, Cherries, Peaches. Plums, Grapes and other fruits. They have also a fine stock of Pears on Quince ready for fruiting. By testing the kinds which they cultivate, and giving close personal attention to their propagation, they insure the correctness of the varieties which they send out. Their assortment of Ornamental Trees and Shrubs includes the standard varieties for the Avenue or Lawn. as well as many new and desirable kinds. Their collection of dwarf and tree *Roses* embraces all that is desirable.

Catalogues furnished gratis on application.

April 1—1t.

PROUTY & BARRETT,

Manufacturers and Wholesale and Retail Dealers in Agricultural and Horticultural Implements, Garden, Grass, Field, and Flower Seeds, 194½ Market-St., Philadelphia,

OFFER for sale an extensive assortment of FARM and GARDEN IMPLEMENTS and SEEDS, consisting in part of the following, viz:—

Prouty & Mears' Patent Centre-draught Self-sharpening, Right and Left Hand, Subsoil and Side Hill, Wheel and Swing PLOWS, with Points and Shares so strong and thoroughly purified and hardened, that 100 acres of land have often been plowed with a *single set*.

These Plows are constructed of the best materials, and of the highest finish, and for ease of draught and management, the facility with which their points and shares are turned and sharpened, the eradication of weeds and the thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, and the money refunded.

To these Plows were awarded TWENTY-THREE PREMIUMS at Trial Matches, during the past year, proving incontestably their great superiority over their numerous competitors.

Improved Cultivators, with steel teeth; Harrows, Revolving Horse Rakes, Agricultural Furnaces and Cauldrons, Corn Mills, Sugar Mills, Seed Planters, Corn Planters, Cheese Presses. Ox Yokes, Hovey's Spiral Hay, Straw, and Corn-stalk Cutter; Corn Shellers. Grant's Patent Fan Mills, and other approved patterns.

Spain's Improved Barrel Churn—Constructed in such a manner that the whole reel or dashers can be removed (whole) from the inside; the Churn is then clear of all impediments in the way of removing the Butter, and of a perfect cleaning.

Cast Steel Hoes, Shovels, Spades, Hay and Manure Forks, Scythes, Snaths, Briar Scythes and Hooks.

AGRICULTURAL, HORTICULTURAL AND FLOWER SEEDS. in great variety, raised expressly for this establishment by careful and experienced seed growers, and warranted.

☞ Orders solicited.

Philadelphia, April 1, 1848—2t.*

NEW WORK ON THE ROSE.

The Rose; its History, Poetry, Culture, and Classification.

By S. B. Parsons. New-York: Wiley & Putnam, pp. 280, royal octavo, with Colored Engravings.

A HANDSOME octavo volume, fully redeeming the promise of its title-page, which the reader will have noted takes in a wide field of practical and classical information. With the practical part of his subject, the culture and classification of the Rose, and with its history to some extent, we expected to find the author somewhat familiar, seeing that he is a well known and successful cultivator But even in these respects, he has shown an amount of knowledge which we scarcely supposed any individual could have brought to their elucidation; while in the literature of the rose, so to speak, he has brought together such numerous tributes to its beauty, fragrance and emblematical character, as prove no mean acquaintance with the best poets. Indeed, his volume is at once agreeable, instructive, and curious, a very pleasant companion to the mere reader, while to the amateur and the professed cultivator of this most beautiful of Flora's gifts, it will be invaluable.—*N. Y. Commercial Advertiser*

Altogether this may be considered the most agreeable and complete work on the rose in the English language. The author has not only collected and arranged all of most interest and value that has hitherto been written on this subject, but he has interwoven through the volume a good deal of interesting information, drawn from his own experience and observation, which has not before been given to the public. The volume is not simply a practical treatise for the rose cultivator, but a pleasant contribution to the library of the scholar, or the book-table of the lady's boudoir.

The volume contains colored plates of two of the new Roses which have elicited most admiration within the last three years—*La Reine* and *Chromatella*.—*Horticulturist.*

We regret that this beautiful and really valuable volume did not arrive while we had room for a notice worthy of its claims to public favor. All that romance, poetry, and science have endowed the Rose with—all that philosophers have found, and lovers fancied, and ladies felt, about this garner of sweet associations, is here set forth, and worthily: while on two shining pages the beauty herself appears, fairly mirrored in her most magnificent aspect, and seeming only to ask the plucking. We love the book.—*Union Magazine, by Mrs. Kirtland.* April 1—2t.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of Agricultural Implements of the latest and most approved patterns.

Plows adapted to every description of soil, embracing a greater variety of patterns than can be found in any other establishment in the United States.

Moore's highest premium Plows.
Freeborn & Hitchcock's do.
Minor, Horton & Co's do.
Ruggles, Nourse & Mason's do.
Prouty & Mear's do.
Subsoil do.

Two and Three Furrow Plows.
Side Hill and Double Mold do.
Cultivators with Steel and Cast Teeth.
Harrows.plain and double hinged
Garden & Canal Wheelbarrows.

Single and Double Corn Shellers. price $5 to $10.

Straw Cutters, Greene's, Steven's, Sinclair's, and other approved patterns.

Mills for grinding Grain. Corn and Cob Crushers.

Horse Powers and Threshing Machines.

Fanning Mills,
Rice do.
Coffee Hullers,
Sugar Mills,
Grain Cradles,
Seed Sowers,

Revolving Hay Rakes,
Hay and Manure Forks,
Scythes & Snathes,
Ox Yokes and Bows,
Log and Trace Chains,
Spades and Shovels.

Plow Castings, Castings for Horse Powers, Mill and Gin Geer, &c., &c. Also on hand and made to order, every description of Brass, Copper and Iron Wire, Cloth, Sieves, Screens, Riddles, &c., &c, all of which will be sold as low as they can be purchased at any establishment in the country.

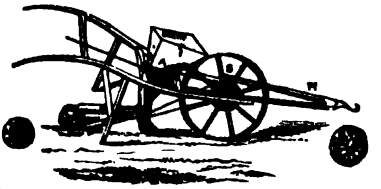
JOHN MOORE,
Ag. Warehouse, 193, old No. 183 Front-st., New-York.

April 1—3t

TWO FARMS FOR SALE,

HANDSOMELY situated one mile north of Northville in the southern part of Cayuga county, each containing seventy-five acres of excellent land, in fine condition, with good farm buildings, orchards, &c. These farms are divided by the stage road between Auburn and Ithaca, equi-distant from each. They will be sold separately or together.

Apply to DAVID THOMAS, near Aurora, Cayuga county, or to ISAAC JACOBS, on the premises. 3 mo. 7, 1848.



EMERY'S SEED PLANTER.

WITH this Planter all small seeds are dropped by means of a revolving brush inside of the hopper, operating upon plates with holes in them. which plates are placed in grooves at the bottom of the hopper—any size hole being used which is found best adapted to the quantity and size of the seed to be sown, thus insuring precision and uniformity in the work. When Corn, Beans, Peas, or any heavy smooth seeds are to be dropped, the revolving brush and plate are removed, and a cylinder substituted with cups or cavities in it, which fill and empty by the gravity of the seed. These cups are made large or small by a simple set screw, which is readily turned up or down to receive any quantity of seed or none at all, thus enabling the quantity and distance between the hills to be regulated at pleasure. The movement of the cylinder is given by a simple small geer, and may, by the different rows of cogs on the large wheel, be regulated to give any velocity desired for different purposes. The furrower or plow can be placed up or down to suit a tall or short person at the handles—can be used by hand by one man, or can be drawn by a horse. From six to twelve acres of corn have been planted in the best possible manner in a day with them—according to the condition of the land.

The subscriber has a good assortment of them on hand and for sale at the Albany Ag. Warehouse, Nos. 10 & 12 Green-street, Albany. Price when fully rigged for all kinds of work, and strong for horse power, $14.

☞ For further particulars see Catalogue, gratis at store, or by mail. H. L. EMERY.

April 1, 1848.

NORMAN.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15½ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500 The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

RARE VEGETABLE SEEDS.

THE subscribers, in addition to their usual regular supplies of all descriptions of Garden, Field and Flower Seeds, have received from the first sources in England, the following NEW AND VALUABLE VEGETABLE GARDEN SEEDS. which will be found an acquisition to any collection, and worthy of trial.

PEAS.

Waite's Queen of Dwarfs.—Very dwarf, and ready for table 20th May. Price $1.50 per quart. Price in London, 5s. sterling.

Early Wonder Peas.—Dwarf and very early; full podded. $1 per quart.

Fairbeard's Early Surprise.—Very early and uniform bearers. $1.50 per quart. Height three feet.

Flack's Victory.—Large blue peas; finer than Dwarf Imperials. 60 cents per quart. Height three feet.

Dancer's Monastery.—Very fine. Height three feet. 50 cents per quart.

Cormack's British Queen.—Very large, shrivelled pea; superior to the famous Knight's Marrow, extra fine. Height four feet. $1.50 per quart.

Champion of England Marrow.—Extra fine, and prodigious bearers. Height four feet. $2 per quart. This is the most rare pea in England.

Banksian Marrow.—Great bearers. Height four feet. 50 cents per quart.

Shilling's Grotto.—Height four feet—fine. 50 cents per quart.

Improved London Dwarf Marrow.—Fine. 37½ cents per quart.

EARLY CABBAGES.

Superfine Early Dwarf—25 cents per ounce

Early Spratsbore—Large, and very early. 25 cents per ounce.

Waite's New Early Dwarf.—50 cents per ounce.

Atkin's Early Dwarf Matchless.—50 cents per ounce.

Shilling's Early Queen.—50 cents per ounce.

Also, superior London Early York—25 cents per ounce.

BROCCOLI.

Early Walcheren.—Very superior. $1 per ounce.

Late Walcheren.—Extra fine. $1 per ounce.

New October White Cape.—$1 per ounce.

Lake's Superior White.—50 cents per ounce.

Late Close Headed Purple.—50 cents per ounce.

Field's Superb White.—50 cents per ounce.

CAULIFLOWER.

Fitche's New Large Late.—Extra fine. $1.50 per ounce.

Early Walcheren.—Extra fine. $1 per ounce.

Late Walcheren.—Extra fine. $1 per ounce.

MISCELLANEOUS.

Shepherd's New Giant Pink Celery, 25 cents per packet—*Seymour's New Red*, 25 cents per packet—*Early Prize Fighter Cucumber*, 25 cents per packet—*Ady's New Coss Lettuce*, 50 cents per ounce—*Pink Edged Union Lettuce*, 25 cents per ounce.—*Myatt's Garnishing Parsley*, 25 cents per ounce.

Also, an extensive assortment of valuable AGRICULTURAL SEEDS, among which are *Skirving's New and Improved Ruta Baga*, to which has been awarded several premiums by the Royal Agricultural Society of England. $1.50 per lb—*Dickson's Improved Ruta Baga*, $1.25 per lb.—Best stock *Mangel Wurtzel*—*Silesia Sugar Beet*—*White Field Belgian Carrot*—*Spring Tares or Vetches*, a valuable and nutritious soiling feed for horses and cows. Also, *White Lupins*, for soiling—*Italian* (annual) and *Pacey's Perennial Ray Grass*—*Sweet Vernal Grass*—*Herds and Blue Grass*—*Fine Mixed English Lawn Grass*, 50 cts.—*White Dutch Honeysuckle Clover*—*Lucerne or French Clover*—*Yellow and Scarlet Trefoil*—Clean *Potato Seed*, 25 cents per packet.

Buckthorn Seed—*Madura or Osage Orange*, and *Honey Locust*, *or Gleditschia*, for Hedging, the last forming an impenetrable fence. *Yellow Ship Locust*—with every thing new and good procureable from both Hemispheres, whether for the Field, Garden or Parterre.

All the above are of the growth of 1847, and warranted genuine.

JAMES M. THORBURN & CO.,
No 15 John-Street, near Broadway, New York.

☞ Catalogues gratis, on application. For new Flower Seeds, &c., see future advertisement. April 1, 1848—1t.

ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess, or suffering injury from its use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

VERY DESIRABLE AND VALUABLE FARM FOR SALE.

THE subscriber offers for sale his farm, pleasantly situated on the Union Turnpike, within half a mile northeast of the city of Hudson, Columbia county, N. Y., containing 70 acres of good land, under a good state of cultivation, and well watered. About 30 acres of which are good plow land, six acres of wood, the remainder is loam, suitable for plow or meadow land. There is a substantial Brick House, a Work Shop, Barn, and necessary outbuildings. Likewise a Cottage on the premises.

This property was formerly owned and improved by the late Elisha Williams, Esq. The subscriber considers it the most desirable property in the neighborhood. To any person wishing to engage in the Milk, Nursery or Gardening business, it offers great advantages. Title indisputable.

Enquire of MILLER & McKINSTRY, Solicitors, Hudson, or the subscriber on the premises. T. H. PEGLER.

April 1, 1848—1t.*

W. & B. DOUGLAS' IMPROVED PREMIUM HYDRAULIC RAM.

A PERFECTLY simple and effective machine for forcing a portion of a brook or spring to any required distance or elevation, where a proportionate fall can be applied.

A SILVER MEDAL was awarded to the subscribers on their Improved Hydraulic Ram by the American Institute, at the Fair held in the city of New-York, in October, 1847. A PREMIUM was also awarded on the same by the Middlesex County Agricultural Society, at their Fair held in this city in October, 1847.

The various uses of the Ram are at once obvious, viz: for the purposes of irrigating Lands, and supplying Dwellings, Gardens, Farms, Factories, Villages, Engines, Railroad Stations, &c., with running water.

The simplicity of the operation of this machine, together with its effectiveness and very apparent durability, renders it decidedly the most important and valuable apparatus yet developed in Hydraulics, for forcing a portion of a running stream of water to any distance and elevation, proportioned to the fall obtained.

It is perfectly applicable where no more than 18 inches fall can be obtained, yet the greater the fall applied, the higher may the water be conveyed, the quantity raised varying in proportion to the height with a given fall. It will raise say one-eleventh of the water ten times the height of the fall to which it is applied. Thus if applied under a fall of five feet, with a supply of eleven gallons per minute, it will force up and discharge at an elevation of fifty feet from machine, one gallon per minute; and under the same head or fall it will of course raise and discharge a larger quantity of water in proportion as the height to which it is conveyed is diminished, and so a less quantity a greater height.

This ram is constructed with an Adjuster, which renders it decidedly superior to any thing of the kind yet invented, as by this improvement the same machine may be conveniently varied in capacity, and at once adapted to various sized streams!

They are composed of metal, and are a very neat, compact and portable article—No. 4, the ordinary size, weighing but about 35 lbs., and occupying only about a cubic foot of space.

The subscribers, manufacturers of the Ram, offer the same in any quantity and of various sizes, to merchants, dealers, and all in want, at prices that cannot fail to please.

In all cases the article is warranted complete and perfect, so as to give the best satisfaction, or it may be returned.

Orders respectfully solicited, to which prompt attention will be given. W. & B. DOUGLAS,
Machinists and Iron Founders, Manufacturers of Pumps, Hydraulic Rams, Friction Rolls, Sheaves, Arbor Cranks, &c.

Middletown, Conn., April 1, 1848.

For sale at the Albany Ag. Warehouse, by H. L. EMERY, Nos. 10 & 12 Green-st.—in Troy, at H. WARREN'S Ag. Warehouse, 315 River-st.; and by the Hardware and other traders in the principal cities of the United States.

PATENT RIGHT SECURED.

N. B.—The following certificates have been very kindly tendered us by gentlemen who have our rams in use:—

CERTIFICATES.

This is to certify, that I have purchased and put in use one of W. & B. Douglas' Improved Hydraulic Rams on my farm, and I am perfectly satisfied and well pleased with the operation of the article, and would recommend its use to all who are desirous of raising water from any spring or other running stream about their premises. The spring to which I have applied the ram is 50 rods from my house, and 75 feet below a level of point where I discharge the water in my dwelling. The size of the drive pipe applied to my ram is 1½ inch calibre, and 40 feet long, and has a fall in running from spring to ram of 10 feet. The discharge pipe, (leading from ram to house) is ½ inch calibre, and 50 rods in length, and runs up an elevation of 85 feet, and the water discharges from the same, in my house, a perfectly steady and handsome stream, without any interruption whatever. And I would invite all, who wish to become acquainted with this new and truly useful invention, to call at my house in Durham and witness its operations.

Durham, Ct., Sept. 25th, 1847. SAMUEL G. TIBBALS.

This is to certify that I have in use on my farm, one of Messrs. W. & B Douglas' Improved Hydraulic Rams, and can most cheerfully recommend it as being an article of the utmost value and utility to all who are desirous of raising a supply of water to their premises.

My spring is some 30 rods distant, and 35 feet below a level of the point where the water is discharged by the ram in my yard. The water is applied to the machine with but 3, ft. head or fall, and thus a portion of it is raised 10 feet high to every foot of fall applied. The size of the drive or supply pipe, from spring to ram, is 1½ inch, and the machine forces up and discharges a constant stream of water in my yard of say half an inch, conveying it up the above named elevation of 35 feet, and a distance of 30 rods.

Upper Middletown, Ct., Jan. 5, 1848. CHARLES MATHER.

THE GENUINE MORGAN HORSE,

GENERAL GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of George A. Mason, two miles northeast of Jordan; Thursdays, Fridays and Saturdays at the stable of D. A. Munro, Camillus.

Terms—$10 the season. Insurance to be agreed upon. Pasturage furnished by either of the subscribers at reasonable prices. Escapes and accidents at the risk of owners. General Gifford was sired by *Gifford Morgan*. His dam a pure Morgan. Breeders of good horses are invited to call and see him.

April 1, 1848—3t. MUNRO & MASON.

HALL'S EARLY JUNE POTATOES.

TWO hundred bushels of these superior and early potatoes for sale at the Albany Ag. Warehouse and Seed Store.

BALL SEMINARY,

HOOSICK FALLS, N. Y.

THIS institution, incorporated by the Regents of the University, and subject to their supervision, has for its object instruction in the higher branches of English education, and the classics, to an advanced standing in college.

Instruction will also be given in Geology, Mineralogy and Agricultural Chemistry; explained and illustrated by lectures, diagrams, and experiments.

The trustees have secured the services of P. V. Veeder, Esq, a graduate of Union College, and favorably known as tutor in that institution, to take charge of the school, who will be aided by competent and faithful assistants.

The Seminary is located in a healthy and pleasant village. The charges are moderate, and the advantages not surpassed by any school in the State. L. CHANDLER BALL, President.

April 1—1t.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N. Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles as small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

P. S. Fluid Cataracts removed without an operation.

April 1—4t.

FRUIT TREES, *of Select Varieties*,

PROPAGATED from trees, whose genuineness or excellence has been proved by thorough examination of the fruit in bearing. For sale at the nursery of the subscriber.

☞ Persons wishing to set out new Fruit Gardens or Orchards, will, if they wish, be furnished with a carefully assorted collection, either large or small, of apples, peaches, cherries, nectarines, apricots, strawberries, hardy grapes, &c., of the best standard varieties, which have been selected after several years careful personal examination, *from several hundred sorts in bearing*.

A fine select assortment of ornamental shrubs, brilliant hardy roses, herbaceous perennial plants, evergreens perfectly hardened for transplanting, &c.

Orders with remittances promptly executed, and trees packed in bundles so as to be sent with perfect safety by canal or railway. Catalogues furnished gratis to all applicants. All communications to be post-paid, and directed, J. J. THOMAS,

March 1—2t. Macedon, Wayne Co., N Y.

ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D., 310 Broadway, New-York, till the 25th of April, and after that time to Croton Point, N. Y., will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well, and produce good fruit when planted in most of the northern, and all of the western, middle, and southern States.

New-York, March 1—2t.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine, will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.

March 1—5t*. 128 Fulton-st., New-York.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

NOTICE—A. J. Downing having retired from the Nursery business, heretofore conducted at this place under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which those nurseries have had, but as the present stock is gradually drawn off Mr. Downing's grounds they will greatly enlarge the nurseries, and fully endeavor to meet the constantly increasing demand for trees grown here. A. SAUL & Co.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. Saul, who has been at the head of this department for the last eight years, and his accuracy and fidelity in the propagation of fruits, and general care of nurseries during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted. A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15th, 1847.

A. SAUL & Co. beg leave to inform the patrons of this establishment and the public in general, that their stock of

Fruit Trees for Spring Planting, 1848,

Comprises nearly all the choice and rare varieties of recent introduction, among which are a fine stock of the *True Peach Plum*, (Prune Peche,) and Dubois' Early Golden Apricot, as well as a large stock, and full assortment of all the leading standard varieties; all propagated from *tested* fruit trees, or the most correct sources, under the personal supervision of A. Saul.

Their stock of ornamental trees is unusually large, (for particulars see Cultivator for October and November, 1847. Also Shrubs, Roses, Vines, &c. &c.: and as they propose clearing a large portion off of Mr. D.'s grounds this spring, to their new grounds, (40 acres,) they will dispose of a large portion of it at reduced rates to nurserymen, or amateurs who want to plant largely for the embellishment of new places. Also a fine stock of

5,000 American Arbor Vitæ, for screens, $15 to $30 per 100.
10,000 Osage Orange plants for hedges, $12 per 1000.
20,000 Buckthorn plants for hedges, $8 per 1000.

Orders addressed as above, *postpaid*, will receive prompt attention, and all trees, plants, &c. will be carefully packed and shipped to any part of the Union. Catalogues gratis to postpaid applicants.

Highland Nurseries, Newburgh, Feb. 10th, 1848.—2t.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5,000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15,000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. THORP & SMITH.

Syracuse, N. Y., Nov 1—6t

A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in in front; has sixteen apartments, including kitchens and cellars. A frame bank barn, with stone basement, 63 by 38 feet; the corner posts twenty-two feet six inches high With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr. Samuel Lawrence of Lowell, Mass., or Messrs. Perkins and Brown of Springfield, Mass. For terms apply on the premises.

February 7th, 1848—3t.* JOHN SMART.

FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and outhouses are new and convenient. A fine large orchard, embracing all kinds of choice fruit trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the west.

March 1—3t. A. H. NICHOLS.

AGRICULTURAL IMPLEMENTS AND SEEDS.

Ruggles, Nourse & Mason,

Inventors & Manufacturers of the genuine Eagle Plows.

TO their extensive assortment of Plows they have recently added new patterns, embracing many important improvements, in form, construction and fixtures, which adapt them to both shoal and deep plowing. The peculiar form of the mould-board to take up the furrow slice and turn it over in the most perfect manner, with the least power of draft, leaving the soil in the best possible condition for after cultivation, and production of crops. The acknowledged strength and durability of the castings, the uniform construction and superior finish of the wood by machinery, are among the characteristics of their Plows.

At the most full, perfect trial and investigation of plows ever had in this country, held at Essex, county Mass., the Judging Committee, in speaking of the Improved Eagle Plow, to which they unanimously awarded the highest premium, say:—"As near as we can ascertain, this Plow combines all the good qualities manifested in either of the others, with some peculiar to itself;" and further, "our attention was called to the *quality* of the castings on the Plows of Ruggles & Co, their *finish* and *durability*. Their appearance is certainly more perfect than any thing we have elsewhere seen." "The process of Chilling the Point, the entire Edge of the Share and Flange or Base of the Landside. gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying that the value of the parts thus made is more than doubled by the process."

The following is a copy of their table showing the comparative amount of power in pounds, required to operate the different plows.

Medium Size Plows.

Winslows's	of Danvers,	462	lbs.
Ruggles & Co.,	of Worcester,	412	"
Prouty & Co.,	of Boston.	425	"
Howard,	of Hingham,	412	"

Large Size Plows.

Winslow	of Danvers,	512	lbs.
Ruggles & Co., Eagle,	of Worcester,	425	"
Prouty & Co., Sod A	of Boston,	487	"
Howard,	of Hingham,	450	"

In 1846, the first premiums were awarded to competitiors who used Plows made by Ruggles, Nourse and Mason, at Plowing matches in the following named counties, to wit: Essex, Middlesex, Worcester, Hampshire and Berkshire, in Mass.; Orleans and Windham, Vt.; Kennebec, Me.; Litchfield and Hartford, Conn.; Prince George's and Montgomery counties, Md.

At the Cattle Shows held in 1847, the following premiums were won by Plowmen with Plows manufactured by Ruggles, Nourse & Mason.

ESSEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 25.
" "	2d Premium,	"	Eagle Sward B.
" "	3d Premium,	"	Eagle No. 25.
Horse Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 2.
" "	3d Premium,	"	Eagle No. 2.
Subbsoiling,	1st Premium,	"	Eagle S. S. No. 1.

MIDDLESEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Doule Team,	1st Premium,	"	Eagle No 20.
" "	2d Premium,	"	Eagle No. 20.
" "	4th Premium,	"	Eagle No 25.
Horse Team,	1st Premium,	"	Eagle No. 2.

BRISTOL COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Sward C.
" "	2d Premium,	"	Eagle No. 2.
" "	4th Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 20.

BARNSTABLE COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Horse Team,	1st Premium,	"	Self Sh'ng No. 3.

HAMPDEN COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 1.
" "	6th Premium,	"	Eagle No. 2.

BERKSHIRE COUNTY, MASS.

1st Premium, and 7 others, Plows, Eagle Nos. 1 and 2.
1st Premium for the best Plows.

HAMPSHIRE COUNTY, MASS.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	7th Premium,	"	Eagle No. 2.
	8th Premium,	"	Eagle No. 2.

MERRIMACK COUNTY, N. H.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	2d Premium,	"	Eagle No. 20.
	3d Premium,	"	Eagle No. 2.

HARTFORD COUNTY, CONN.

1st Premium,	Plow,	Eagle No. 25.
2d Premium,	"	Eagle No. 2.
3d Premium,	"	Sward D.

WASHINGTON COUNTY, VT.

1st Premium,	Plow,	Eagle No. 2.

ROCHESTER, MONROE COUNTY, N. Y.

Horse Team, only used	1st Premium,	Plow,	Sward C.
	2d Premium,	"	Eagle No. 25.

MONTGOMERY COUNTY, MD

1st Premium for 3 horse size, Eagle No. 25.
1st Premium " 1 " " Self Sharpener No. 1.

They have also constructed a series of new patterns of plows of various sizes and forms, (some with wrought mould plates, shares, or points,) expressly calculated for the different *kinds* and *methods* of cultivation practiced in the Southern States, and which embrace all the alterations which a long and thorough investigation, and more extended acquaintance with southern culture has suggested, to render them peculiarly adapted to the wants of the planters.

Their stock of Garden and Field *Seeds* are raised especially for their trade, by most reliable and experienced growers, and are warranted fresh, and true to their names.

Their prices being *uniform*, purchasers can rely on having all orders executed on as favorable terms, and promptly as though they were personally present.

Dealers supplied on the most advantageous terms.

A supply of PLOWS and other articles from their establishment may be found at the stores of L. Tucker, Albany; A B. Allen & Co., New-York city; R. L. Allen, New-Orleans; and at many other cities and principal towns throughout the country.

P. S. As it is impracticable here to give a detailed list of articles embraced in so great a variety, the proprietors propose to forward, (*gratis*) to persons requesting them, by mail or otherwise, descriptive catalogues of implements and seeds, of nearly 100 pages, embellished with cuts of tools, and embracing brief directions for sowing. planting and culture, rules for the application of Guano, Plaster and Bone Dust, with remarks on soils and plowing; and with general observations, list of agricultural and horticultural publications, &c. &c.

Worcester and Boston, Mass., March 1, 1848—3t.

FINE BLOOD MERINO SHEEP FOR SALE.

THE subscriber being about to retire from the farming business, offers for sale his entire flock of Merino sheep, which have been bred with the greatest care from the best flocks in the country. Of these 75 are ewes now with lamb by a buck from the recent imported flock of John A. Taintor, Esq., of Hartford, Conn.; 25 bucks one year old last spring from the above ewes, sired by the Rambouillet buck Chancellor; and 50 lambs the increase of last year, sired by the Rambouillet buck Grandee, now owned by the Rev. L. G. Bingham, of this place. As to purity of blood, fineness and weight of fleece, and strength of constitution, they are excelled by no Merinos in the country. The buck purchased from the recent importation of Mr. Taintor will also be offered for sale. To those wishing to improve their sheep, or those wishing to start a good flock, the present offers a rare opportunity, as they will be sold without reserve. Communications addressed to the subscriber will receive immediate attention THOS. D. CANFIELD.

Williston, Vt., Jan. 15, 1848—3t.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

POUDRETTE.

THE LODI MANUFACTURING CO. offer for sale their New and Improved POUDRETTE, at the following reduced prices: One barrel, $2; three barrels, $5; and seven barrels and upwards at $1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels ($3 worth) will suffice per acre, and bring a good crop; the labor being less than one-half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B. Allen & Co, agents, No 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t*.

TO BREEDERS OF FAST HORSES.

THE celebrated Stallion Colt "ANGLO-SAXON," will stand for the ensuing season, at the farm of *Josiah Crosby*, in North Andover, Mass "Anglo-Saxon" was sired by the original Black Hawk, now owned by the Messrs. Hill, in Vermont. He will be four years old in July next. His color is a bright bay. He weighs a thousand pounds, and though not entirely broken to harness, has great speed and splendid action. He took the first premium at the last Fair of the Essex County Agricultural Society; and has been pronounced by amateurs a *perfect* animal. Like the rest of the "Black Hawks," he needs no encomium. Breeders are requested to examine and judge for themselves.

The "Lady Lawrence," a five years old chestnut mare, sired by Black Hawk, may be seen at the same stable. She can trot her mile in two minutes and forty seconds—has never been trained, and can be bought for $1000, if applied for immediately.

North Andover, March 1st, 1848.—2t*

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ALBANY AGRICULTURAL WAREHOUSE.

THE subscriber hereby gives notice, that he has disposed of his interest in this establishment to Mr. Horace L. Emery, who will hereafter continue the business in his own name, at the old stand, Nos 10 & 12 Green st., Albany. All demands against the establishment will be paid by him; and all persons indebted to it, are requested to settle their accounts with him without delay.

Mr. Emery has had the entire management of the Albany Agricultural Warehouse since it has been in my hands, and from an acquaintance thus formed with him, and from his long experience in the business, having been engaged in it some ten years, five of which was spent in the establishment of Messrs. Ruggles, Nourse & Mason, at Boston and Worcester, Mass., (the largest in America,) I feel an entire confidence in commending him to the public as one in whose integrity and judgment the patrons of the establishment may safely rely.

Albany, Feb. 1, 1848. **LUTHER TUCKER.**

N. B. The publication of the Cultivator and Horticulturist will be continued at the same stand as heretofore.

THE subscriber tenders his thanks to the public for the liberal encouragement and patronage shown towards the establishment since under his management, and hopes with the increasing interest manifested by the agricultural community for improvement and good tools, and constant and persevering attention on his part to the interests of the establishment and its patrons, to merit a continuance of the same. He intends at all times to keep the best of implements, from the best manufacturers of this or other countries; also a full and complete assortment of Grain, Field, Grass, Garden and Flower Seeds; and all business will be transacted as heretofore upon the *One Price System*.

For prices, descriptions, &c., see Catalogue of Agricultural Warehouse, gratis, at Store, or by mail, to post-paid applicants.

HORACE L. EMERY,
Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, N. Y.

NEW-YORK AGRICULTURAL WAREHOUSE AND SEED STORE.

THE subscribers keep constantly on hand a large and complete assortment of Agricultural and Horticultural Implements, and Field and Garden Seeds of all kinds.

Our implements embrace upwards of sixty different sizes and kinds of Plows, among which are the celebrated Ruggles, Nourse & Mason's Eagle, Center Draft, Self-Sharpener, Side Hill, Cotton, Rice, Sugar Cane, Double Mould Board, Trenching, Subsoil, &c., &c. Also, Harrows, Rollers, Cultivators, Corn Shellers, Straw Cutters, Wheat and Corn Mills, Horse Powers, Threshers, Scythes, Cradles, Axes, Horse and Hand Rakes, Shovels, Spades, Hoes, Grafting Tools, &c., &c.

A Catalogue of the above of 100 pages, illustrated with numerous engravings, will be sent gratis to all who apply for it, post-paid.

A. B. ALLEN & CO.,
April 1, 1848—1t. 187 Water-st., New-York

FIELD AND GARDEN SEEDS.

A COMPLETE assortment of American Field and Garden Seeds, of all kinds, principally grown and put up expressly for us.

Also, Fresh English and French Grass and other Seeds, just received. Among these are the Perennial and Italian Ray Grass, Sweet Vernal and Oat Grass, fine mixed Lawn Grass, White Clover and Lucerne. Also, English Beans, Vetches, Ruta Baga Seed, &c., &c.

Agricultural and Horticultural Implements, a complete assortment.

The American Agriculturist, a monthly publication of 32 pages. Price $1 a year.

New-York Agricultural Warehouse and Seed Store, 187 Water-street, New-York. A. B. ALLEN & CO.

April 1, 1848—1t.

THE EAGLE PLOW.

PROBABLY no Plow has been so long before the public with so few alterations, come into so general use, or received so many, and of so high grade premiums, as the Eagle Plows, from the establishment of Messrs. Ruggles, Nourse and Mason.

Notwithstanding the great diversity of soils, modes of culture, and the increasing competition of many distinguished manufacturers, and year after year having been subjected to the most systematic, persevering and thorough trials ever had in this country, it still stands at the head of the list for excellence of work, materials, workmanship, durability and price.

By referring to the advertisement of the manufacturers in this and the last number of the Cultivator, will be seen the high estimation put upon them by committees and plowmen, as well as their very general use where they have become known.

It is but just here to state, that in the most important trials in New England, the plowmen are required to use the same plows and teams which have been used on their farms, not less than sixty days previous to the trials. The owners are required to hold their own plows, to perform a certain amount of work, usually one-eighth of an acre of a given width and depth of furrows, in a given time. All of which rules and regulations are made known months before-hand, thus avoiding very many difficulties which often arise in deciding who really merit the awards and premiums.

A full and complete assortment constantly on hand and for sale at *manufacturer's home prices at wholesale and retail*, at the Albany Ag Warehouse, Nos 10 & 12 Green-st., Albany, by

April 1 H. L. EMERY.

BUCKTHORN PLANTS AND SEEDS;

ALSO OSAGE ORANGE PLANTS. A full and large supply on hand, and for sale at the Albany Ag. Warehouse and Seed Store. April 1

OSAGE ORANGE SEED—(*Maclura aurantiaca.*)

THE best article known for hedges or live fences. A large supply of the seed just arrived from Texas, price $2 per quart—a liberal discount at wholesale. Directions for planting, &c., furnished to customers. Office of the Ohio Cultivator, Columbus, Ohio. M. B. BATEHAM.

☞ Packages can be safely forwarded to any place on important stage routes in Ohio, on the Ohio river, or eastward by Express.

April 1—1t.

OSAGE ORANGE SEED.

THIRTY-five bushels Osage Orange Seed, growth of 1847, just received and for sale by ALONZO HITCHCOCK, St Louis, Missouri. April 1—1t.

DARLING'S IMPROVED EARLY SWEET CORN.

A LIMITED supply of this excellent seed corn for early use. Also a supply of early White Flint, Early Canada, Jewett's Improved and Dutton Seed Corn. For sale at the Albany Agricultural Warehouse. April 1.

UPLAND CRANBERRY PLANTS.

FROM a field that has produced twelve hundred and eighty dollars worth of fruit per acre in one season.

For sale in large or small quantities on the best terms by

B. G. BOSWELL,
April 1—1t. 230 Pine-st., Philadelphia.

NURSERY TREES FOR SALE.

GRAFTED Cherry Trees—price 50 cents each—*Innoculated Peach Trees*—price 12 1-2 cents each. Also a few Peach trees raised from stones brought from Buenos Ayres, where the fruit is said to be of superior quality. These trees are of two years growth, and not inoculated—price 50 cents each.

Asparagus roots of two and three years large growth at $5 per thousand, by ISAAC ROOSEVELT,
Pelham, near New Rochelle, Westchester Co, N. Y.
Feb. 21, 1848—1t.*

THE CULTIVATOR
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LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, MAY, 1848. No. 5.

THE FARM OF E. PHINNEY, ESQ.

(*Continued from page 107.*)

EDITORS CULTIVATOR—In my last communication, I proposed to continue my notes on Mr. PHINNEY'S farming, under the following heads:

DRAINING AND RECLAIMING SWAMPS AND WET LANDS.—There is an extensive peat-meadow on the farm, the greater part of which has been reclaimed by thorough draining and cultivation. Mr. Phinney says that the only way to make these meadows dry and productive in valuable grasses, is to ditch around the margin so as to cut off the springs and receive the water which flows in continually from the surrounding uplands. It is the water flowing in underneath, and not that falling on the surface, that renders the land cold, wet, and unproductive. In order to effect this, he has a very thorough ditch around the margin of the meadow, which is filled with stones to within a foot or so of the surface; they are then covered with refuse hay, straw or sods, and the whole levelled off with the soil, so that the plow may pass over in cultivation. His meadow is very wide, and therefore he has another ditch through the centre, connected with the marginal ones by cross-ditches, and through these the water filters among the stones, and is carried off perfectly.

After this has been done, the wild grasses and other herbage are exterminated by thorough cultivation. If the meadow becomes dry enough during the season to plow, the turf is turned over as smoothly as possible and rolled down hard; in the winter a top-dressing of compost, made of loam and manure, half and half, 20 to 30 loads per acre, is carried on, and in the spring it is planted to corn, or some other hoed crop, without disturbing the sod. If the plow does not turn the sods smoothly over, the bog-hoe follows making the uneven places level. When the crop is taken off in the fall, the surface is loosened and made level with the hoe and harrow, and late in the fall, or just before heavy frosts set in to freeze up the ground, the land is stocked down to grass with a bushel of red-top and half bushel of herd's-grass seed per acre; the field is again rolled and the process completed, the seed coming up the next spring. If the land is intended for grass, without any previous cultivation, the turf is turned over with the plow at a favorable time during the summer; the hoe following makes all smooth, and late in the fall a dressing of compost, as before stated, is put on, the grass-seed sown, and the bush and roller complete the operation. If the ground is too wet and miry to admit the team and plow upon it in the summer, Mr. Phinney would advise to plow in the spring, when the frost is about three or four inches deep, and then cart on the compost-dressing, and, at the proper time, plant or seed down as may be most desirable.

Instead of this method of cultivation, the practice has been, and is now pursued by some, to cover the meadows two or three inches thick with sand or gravel, and then a top-dressing of compost; but Mr. Phinney's experience is against this method of cultivation, from the fact that, after a year or two, the coarse, wild grasses are apt to work up through the covering, and entirely supplant the cultivated grasses. The whole must then have another covering or be abandoned as worthless. The expense of this system is also much greater than that pursued by Mr. Phinney.

Considerable difficulty arises in the cultivation of this kind of land, from its being too loose and open, or spongy; and hence it is considered of much importance to keep the inverted sod undisturbed in the cultivation; as by this means a more firm and compact surface is formed, upon which the team may work without miring; and, the dressing of compost also helping to fill up the pores that may be open on top, affords greater facility for the fine roots of the cultivated grasses to expand more readily, and fully occupy and cover the ground. In five or six years the wild grasses may begin to appear; in which case the land is again broken up and managed as before. In this way heavy crops of corn and roots, and an immense burden of hay, may be raised on these reclaimed meadows.

There is another field on this farm, I should judge of eight to ten acres, of oblong shape, the sides dishing towards the centre, and the whole moderately descending lengthwise, which he has now in hand for draining. It is naturally a wet, unproductive, *swaley* soil, resting on an impervious hard-pan at about two feet below the surface. A marginal ditch, three feet wide and three deep, is made on each side of the field through its whole length, which cuts off the springs, and receives the water flowing in from the uplands; another parallel with these runs through the centre of the field, and the two former are connected with the latter by cross-ditches occurring every two or three rods, by which means the water is carried into the lowest or centre ditch, through which it passes off the field. These are all filled with stones two feet deep, which are covered, first with shavings, refuse litter or sods to keep the dirt out from the stones, and then with earth so as to make all smooth and level. The surplus water is thus carried off perfectly, as may be ascertained by holding the ear near the surface, over the drains, when the water may be distinctly heard filtering through among the stones.

This piece of drainage must prove a profitable investment; because the land, from its situation, receives the surface-wash of many highly cultivated acres on each side, the whole value of which will now be retained—the land being drained with *covered* ditches—

and, with an occasional light top-dressing of compost, must inevitably cut a heavy burden of grass, of fine and thick bottom, for many years to come. How many acres of land may be found, the whole country over, precisely in the condition of this field, where quite an outlay even, would prove a judicious and profitable investment?—the more profitable from the fact that, while in their cold and wet condition, all the surface-wash of the surrounding uplands, often times extensive, is wholly lost; it might be made available by thorough underdraining, and would of itself keep the land so receiving it highly productive.

Orchards and their Cultivation.—There are two bearing orchards on the farm. One, planted about twenty years ago, contains some five hundred trees, mostly of the Baldwin apple, a variety that flourishes best on his soil and location; and the other, ten or twelve years old, contains between three and four hundred trees of choice winter sweet apples. The ground upon which the Baldwin orchard is planted, has a south and southeast exposure, and was, originally, in a perfectly wild and unsubdued state, covered with stones and shrub-oaks, pines and other bushes. Hundreds of tons of these stones were put into the ditches for draining the peat-meadow, towards which the orchard descends. After the obstructions to cultivation were removed from the ground, a light, free rich loam was found, resting upon a gravelly, and in some places, ledgy bottom.

The sweet apple orchard has, I should say, an eastern exposure, and, for skilful pruning, healthiness and vigor of the trees, presents an appearance far superior to anything of the kind I had before seen.

In reply to the inquiries of the Hon. John Lowell, several years since, Mr. Phinney says:—"Most of my trees were taken from the nursery in November, the roots placed in trenches, and covered with dirt until the following spring. This was done in order to avoid the necessity of setting them out before the ground had become dry and warm. If left in the nursery till spring they are seldom or never taken up till the sap has begun to flow. When removed after this takes place, the check occasioned by the removal, if not fatal to the true, often injures its future growth. The best time to take up trees is unquestionably when the sap is least active. If taken up late in autumn, and the roots secured from sun and air, they may be kept with perfect safety until the middle of May, and planted out at this time with proper care, and as near the surface as possible, vegetation will commence almost instantaneously; they will not require to be supported by stakes, and will grow nearly as much the first as in any future year."

While the trees were young and the branches small, and at the season when the sap is most freely flowing, and the growth most rapid, the operation of pruning has, mostly, been performed by Mr. Phinney personally, and the orchards now show the hand of skill and judgment in their training. Those branches which tended to shoot out horizontally, or nearly at right angles from the trunk, were left to grow; while those which inclined to grow more erect, or at an angle of 45 degrees, were taken off—the whole operation being so managed as that no limb should shade any other limb, and at the same time an eye was kept to the proper and equal balance of the top.

By this mode of pruning the tops are spread out horizontally from the trunk, thus admitting the sun to exert his genial influence in the perfecting and ripening of all the fruit; with the further advantages that it is gathered with greater facility, and the limbs are much less liable to split off from the trunk, when loaded with fruit, than those rising to an angle more acute. In the former case, the limb may bend and sway considerably, without straining very hard on the trunk, while in the latter, the strain commences almost as soon as the limb is inclined to bend with its load.

Probably the principal cause of the remarkable vigor and healthiness of the trees, is to be found in the fact that the land is kept in constant cultivation, no grass or weeds being permitted to grow in the soil. It is not thought desirable to manure the orchards heavily, as by this means they may be forced too much; but the land receives a light dressing of compost each year, and here his crops of carrots, parsneps and other roots—of which he raises large quantities—his squashes, pumpkins, melons, &c., are mostly grown. Corn is also planted to some extent.

The trees stand in straight rows, both ways, about two rods apart. The manure is plowed in, great care being used not to wound the trees above ground, and I noticed that no signs of injury to the bark were any where to be seen. No particular attention is paid to the roots; if one happens to come to the surface it is cut off, which only causes new fibres to shoot out with greater vigor. It is considered that root pruning, to some extent, is beneficial rather than otherwise.

A few years since, the mice girdled quite a number of the trees badly, in the Baldwin orchard, and in order to save them, large scions were prepared and inserted in the bark below the wound and connected with the bark above, so that the sap might flow up from the roots into the top. The trees have done remarkably well and are good bearers; the scions having grown so as to form solid wood all round. In a few instances the roots were so badly mangled that four small trees were set out around the trunk, and the tops of them inserted into the bark above the wound. They have grown to a diameter of four to six inches, and support the original tree perfectly.

A young orchard, with a northern exposure, has recently been set, of several hundred trees, at the distance of fifty feet, each way, which is considered near enough. In a few years the ground will be shaded sufficiently, and as the land is designed to be under constant cultivation, the crops raised upon it will be more valuable. Between these are set peach trees, which come to bearing soon, and are out of the way before they will interfere with the apple orchard. The ground was taken up from a wild state, covered with stones and bushes, and, notwithstanding that two coats of the stones have been removed, the last plowing has brought up another, that of itself gives the field a most formidable appearance. In three or four years more they will all be removed, and a light, free and productive soil obtained, well adapted to the raising of roots and vines. Besides these orchards, there is an abundant supply of other choice fruits, such as pears, plums, quinces, &c., and extensive graperies, which I should gladly notice more particularly did my limits permit.

Breeding and Fattening Swine.—I have before remarked that Mr. P. is not, just now, doing much in the way of rearing swine; and of course I had not the opportunity of much personal inspection in this heretofore important department of his farming. His long and extensive experience in this business, however, entitles his opinions to much consideration; and a passing notice of them may not be without interest to some of the readers of the Cultivator.

His stock of swine, for several years past, has numbered about one hundred and fifty of all ages; and his slaughtered hogs have been celebrated, in Boston market, for their great weight and fine quality. Every attention has been paid to the manufacture of manure from this large stock, the pens being supplied liberally with peat-mud, and other materials for the purpose; in return he has received from this source some 500 loads annually of excellent compost.

He prefers the Mackay hog to all other breeds that he has known, for their early maturity, depth of carcass, and great weight in the more profitable parts, thinness and whiteness of skin, &c. By breeding in and in, they had become enfeebled in constitution, and it became necessary to cross them, somewhat, with other breeds in order to remedy the defect. He is now crossing them with the Suffolk breed, and, judging from the few specimens of this cross which I saw, I should say that it produces a hog of desirable properties in every respect. The Suffolks are remarkable for thrift, vigor of constitution, early maturity, &c., but have not quite the depth of carcass, I should think, of the Mackays. So far as my experience goes, I should consider this depth of carcass a very essential point. I have invariably found, in my pens, that a hog of great *roundness* of form does not, at killing time, open well. Another recommendation, as I consider it, these hogs are perfectly white. If the pigs are to be killed at the age of nine months, Mr. Phinney would advise that they be kept as fat as possible all the time; but if intended for killing at the age of fifteen or eighteen months, they should not be full-fed for the first ten or twelve months.

Upon this subject he says: "To satisfy myself of the benefit of this course, I took 6 of my best pigs, 8 weeks old, all of the same litter, and shut them in two pens, three in each. Three of these I fed very high, and kept them as fat all the time as they could be made. The other three were fed sparingly, upon coarse food, but kept in a healthy growing condition, till within 4 or 5 months of the time of killing, when they were fed as high as the others. They were all slaughtered at the same time, being then sixteen months old. At the age of nine months the full fed pigs were much the heaviest, but at the time of killing, the pigs fed sparingly for the first ten or twelve months, weighed upon an average, fifty pounds each more than the others. Besides this additional weight of pork, the three 'lean kine' added much more than the others to my manure heap. These results would seem very obvious to any one who has noticed the habits of the animal. In consequence of short feeding they were much more active and industrious in the manufacture of compost, and this activity at the same time caused the muscles to enlarge and the frame to spread, while the very fat pigs became inactive, and like indolent bipeds, they neither worked for their own benefit nor for that of others."

The pigs intended for killing at fifteen to sixteen months, are kept upon light feed for ten or twelve months, and in the summer green clover, cornstalks, weeds, &c., are thrown into the pens, daily. The remainder of the time, until slaughtered, they are full-fed upon Indian or barley meal, in equal quantities with potatoes, pumpkins or apples, the whole being thoroughly and nicely cooked and salted, and fed about blood-warm. It is considered, from repeated experiments, that two dollars worth of material, thoroughly cooked, will make as much pork as three dollars worth of the same material, given in a raw state.

Upon the subject of care and feeding, Mr. P. says: "On regular and systematic feeding, and clean and dry bedding, the success of raising and fattening swine very much depends. A faithful feeder, also, who has some skill and taste, and withal a little pride of vocation, is indispensible. Homer informs us that much of the success of Ulysses in rearing his fine hogs, was to be attributed to his faithful Umeus, whom the old soldier styled god-like swine-feeder."

THE IMPORTED STOCK OF THE MASS. SOCIETY.—In addition to twenty or thirty cows, kept for supplying milk for the city of Boston, is the imported stock and their offspring, belonging to the "Massachusetts Society for promoting agriculture," which are kept on this farm. This ancient and truly honorable Society, have set the rest of us an example worthy of all imitation. They have formerly spent thousands of dollars in the shape of premiums on field crops, the best cultivated farms, &c.; but finding this course too frequently attended with unsatisfactory results, from the fact that premiums were often sought after merely from the consideration of dollars and cents, rather than a spirit of enterprise in agricultural improvements—thereby giving rise, it is feared in too many cases, to the practice of deception—the trustees resolved to try a new and different appropriation of their funds.

They accordingly employed a competent agent in Scotland to purchase four cows and a bull each, of the Ayrshire and North-Devon breeds, the progeny of which are to be distributed among the several County Agricultural Societies, free of charge, on condition that they shall be kept in the county for the improvement of its stock. The oldest Society is entitled to the first choice of a bull and heifer of the offspring, and then the next oldest, and so on. These young animals are not allowed to go from under the care and supervision of the State Society, until they are of suitable age to be put to service.

The trustees are of opinion that for dairy purposes, there is no stock so well adapted to the soil and climate of Massachusetts, as the Ayrshire and crosses of them upon the common stock of the Commonwealth. Mr. Phinney says:—"From what I have seen and known of this and other imported breeds of cows, I am satisfied that as a dairy stock for New England, there is no breed in this or any other country so valuable as the Ayrshire. They are quite as hardy, and endure our cold weather as well as our native stock. They are of medium size, with enormous milk-vessels, and withal, a capacity for converting their food to milk much beyond any breed that I have known."

From the specimens of Ayrshires that I had seen before visiting this farm, I had not formed so favorable an opinion of the stock as Mr. Phinney expresses above; but I must confess that I was very agreeably surprised on viewing this herd. The cows are in every respect, fine models of what a dairy cow should be; their udders are very broad and reach far forward, with remarkably wide spread teats, and give every indication of being deep milkers. I was particularly pleased with the cow "Jonnie Deans," a perfect model for the dairy, and a perfect picture, which it would be difficult for an artist to flatter. The celebrated cow "Young Swinley," purchased of Capt. Randall, of New Bedford, and whose dam "Swinley" "took more prizes than any cow in Scotland," is also a fine animal.

The North Devons will be great favorites with the farmers generally for their beautiful, deep, mahogany color, and fine silky coats, their hardiness of constitution, fitness for the yoke, and tendency to fatten easily. I do not wish to forestall the judgment of those more particularly interested, by a comparison of the two breeds, and therefore will not institute any.

It is truly fortunate that this stock has come under the care of one of so much skill and judgment, in the matter of their treatment. There is nothing like pampering or stimulating with grain at all allowed in feeding, a fact that I particularly noticed, being in and out of the barns frequently during my visit, but all the good hay they will eat up clean, and a generous mess of carrots, daily, is allowed to each animal. They are also kept perfectly clean; in fact cleanliness, and freedom from all waste of fodder, are the order of the day in every department at the barns. Regularity in feeding and milking is also strictly observed.

The calves are learned to drink milk fresh from the cow by the time they are a week old at the farthest, which is continued to them ten or twelve weeks. In the meantime they are encouraged to eat a little fine hay and nibble at a few carrots, which is of essential service in weaning them from milk.

I have said that the honorable board of trustees have set an example for us all to imitate. Here is certainly an object worthy the consideration of other State Societies; and I would particularly call the attention of my agricultural brethren in Vermont to the importance of the subject. We have now a State Society in embryo, with no definite plan of action before us, and why cannot something of this kind be presented and carried through? The State is, and must ever be, eminently a dairying and stock-growing region, and hence the importance to our farmers of an improved race of cattle. There is too much reason to doubt the utility of premiums as they are often paid out; because the statements of competitors are so defective, and generally so unsatisfactory, in establishing clearly defined facts of general utility. It seems to me, however, that in the improvement of the stock of a region, like that contemplated by the Massachusetts Society, money may be expended that shall prove of constantly increasing utility. There is evidently a deep and growing interest in the promotion of our agriculture, felt by men of intelligence and influence in all parts of the State; and it is to be hoped that a sufficient concert of action may be realized, whereby our State Society—availing itself of the *past experience* of the Massachusetts Society—may enter at once upon the improvement of this commanding interest. F. HOLBROOK.

Brattleboro, Vt., March 10, 1848.

"RUNNING OUT OF VARIETIES."

UNDER this head we published a communication in our March number from H. A. PARSONS, Esq. Without intending to enter at this time into a detailed discussion of the subject, we think it proper to state a few of the reasons why we dissent from some of Mr. P.'s conclusions.

He is mistaken in supposing we had expressed the opinion that plants, under any circumstances, "do not degenerate." This is not our position; but we hold that plants have no *natural* tendency to degeneration. Mr. P. on the other hand, if we understand him, believes that all plants have an *inherent* tendency of this kind—that degeneracy results from an original, or constitutional principle. He thinks "the science of botany and vegetable physiology," prove that any plant continued from "the same seed on the same soil," will "degenerate till it becomes extinct."

That degeneracy may follow from growing a plant "from the same seed on the same soil," is not improbable; but does this consequence ensue from the natural decline of the species or variety to which the plant belongs, or from the exhaustion of the soil and unfavorable external influences? *This is the question.*

Let it be remembered that every plant requires its specific food; and that each successive crop, or generation of the same kind of plant, takes something from the soil. Hence it necessarily follows that this loss must be supplied, or exhaustion will follow; and as the food required by the plant is lessened, it is evident that the amount of produce will be lessened in a corresponding ratio. But is it proper to say that a decline of this kind, is the result of any law of "botany or vegetable physiology?" But though Mr. Parsons has told us that such a law exists, he has not told *what* it is, or where it may be found, as expressed or understood by those who believe in its validity.

It will be observed that the theory advocated by Mr. Parsons applies to "*any* plant," including not only those which are propagated by buds, bulbs, or tubers, but all others, whatever may be their mode of reproduction. But without any reference to the persons who have given credence to this theory, let us ask, is it sustained by facts? Is there anything within our knowledge connected with the cultivation or growth of grains, fruits or vegetables, which can constitute a basis for such a theory? Take wheat, for example. Some of the varieties held in highest estimation, are known to have been cultivated in the districts where they are now found, for several centuries; and a variety cultivated in Egypt, (the *Triticum compositum*) has been grown on the banks of the Nile for more than *three thousand* years. There are several facts that establish this conclusion; but the following may be taken as a *demonstration:* The ancient people of that country, sometimes placed small quantities of wheat in the embalmed bodies of their dead. In several instances wheat has been taken from mummies, which, from hieroglyphical records connected with them, were known to have been interred for the long period mentioned; and this wheat on being sown has vegetated, and been found to be identically the same kind as that grown in Egypt at the present day! How long a time is required for this kind of plant, "grown from the same seed on the same soil," to "become extinct?"

But Mr. Knight believed that some old kinds of pears and apples had become unprofitable on account of their constitutional decline. Were he now alive, he would have sufficient evidence that his theory would not apply to the kinds mentioned by him. The Autumn Bergamot is said to be the oldest variety of pear known, having been cultivated by the Romans two thousand years ago. Mr. Knight thought it was about to become extinct. In France and other parts of Europe it now does well, and in this country, according to Downing, it grows vigorously, and bears good crops. The Brown Beurré, St. Germain, Chaumontelle, and White Doyenné, (Virgalieu or St. Michael,) are all old kinds—some of them have been known for two hundred years—yet all produce well, in good soils, in this country, and are said to produce better in France than they did several years ago. The White Doyenne, which from having failed around Boston, was taken by some as an evidence in support of Mr. Knight's theory, is considered in the Genesee valley (according to a statement of J. J. Thomas, in the March number of the Horticulturist,) one of the most productive, hardy and healthy varieties there known.

Of apples, the Golden Pippin and Nonpareil are very old sorts, and were supposed by Knight to have "run out." The former has been cultivated for nearly two hundred years. It is well known that these kinds flourish well on proper soils in this country. We have seen the fruit of both varieties in the highest perfection; and even in England the failure in Mr. Knight's time was only partial, and by improved cultivation the former productiveness of the kinds has there been restored.

Take an example of another kind:—The common variety of red currant has been propagated by buds or scions from a time the memory of man goeth not beyond; and the same is true of several kinds of grapes, and also of roses. Have they any less constitutional vigor now, than at the earliest period of which we have any account of them? Where they are put on proper soil and receive proper training, they flourish well. How much longer must this system of propagation be continued, before the varieties will "become extinct?"

Mr. Parsons refers to the potato. He thinks the natural tendency of varieties to wear out, has already exterminated many, and that others are fast failing from the same cause. The non-production of balls he regards as an evidence of decline in constitutional vigor. Our observation would not justify this conclusion. Some of the strongest-growing and most productive kinds have never been much inclined to produce balls, (or seed.) This fact is well known, and the idea has been taken from it, that it is an advantage to pinch off the blossoms from those kinds which produce them, in order to prevent the energies of the plant from being exhausted by the production of seed, and throw more force into the production of tubers. This course has been considerably practiced in England. The Merino or Long-Red, an old variety introduced from South America about fifty years ago, has never produced but few balls, and its vigor and productiveness is remarkable; whereas the Mercer or Neshannock, a kind originated in Pennsylvania at a comparatively late period, and generally spoken of as particularly susceptible to disease, produces plenty of balls. A person in this vicinity has raised potatoes from the balls of this kind for two years in succession, and they have all been diseased. Prof. Norton informs us that in Scotland the "cups," and those "*kinds which bear no apples, are in general least affected*" with the disease.

The decrease of the potato crop from 1843 to 1846, is supposed by Mr. Parsons to result from "a general degeneracy of the varieties now in use." Everybody knows that the deficiency in this crop is chiefly caused by the "potato disease;" and the unavoidable inference, therefore, from Mr. P.'s language, is that the *disease* is the result of constitutional degeneracy, and that on this account the old kinds should be replaced by new ones, raised from seed. But does his own reasoning bear out the proposition? He cites the practice of farmers in Nova Scotia, "where," says he, "the finest potatoes were formerly grown." "They [the farmers of Nova Scotia] place little reliance on the introduction of tubers from abroad; their experience tells them that a reproduction from the seed-balls is the most sure and profitable. *And in no part of the world, probably, has reproduction been resorted to oftener than there.*" We have italicised the words composing the last sentence, because we wish that they should be particularly observed in connection with the FACT, (which we derive from a comparison of the various accounts given,) *that in no part of this country has the potato suffered more from disease than in Nova Scotia!* This is a sufficient comment on this point.

Again, if the disease was the result of constitutional weakness, should we not see evidence of such weakness in a feeble growth of the plant from the start? But instead of this it is certain that potatoes were never known to grow more vigorously, or present generally a finer appearance in their earlier stages, than in the seasons in which the disease has prevailed. The flourishing condition of the crop last season, up to the time when the blight of the tops first appeared, was the subject of general remark; and the growth of tubers was in most cases more than commonly great; but, with the exception of a few varieties, which from their hardiness were in a measure exempted from attack, those which the disease found in an *unripened state*, perished. According to Prof. Norton it has been so in Scotland. In general, he says, "the best crops on the best soil, have suffered most."

In examining the question as to the decline of varieties, we have compared many accounts from every part of this country where the disease is known, as well as those of the most authentic character from Europe; and it is certain that the evidence does not justify the conclusion that old varieties are most affected, or that any exemption in favor of new ones is exhibited.

The Highland Agricultural Society of Scotland, and the Agricultural Chemistry Association, have very thoroughly investigated this matter, and have collected a great amount of information, in the form of answers to questions which have been addressed to persons in various parts of Britain. Prof. Norton, in his essay on the potato disease, published in the Transactions of the New-York State Agricultural Society for 1845, has given the principal facts which the Highland Society had then collected on this point; all of which tended to show that varieties lately produced from seed, were as badly affected by the disease as any others. One man mentions that he had *sixty* varieties, only two to three years from seed, raised on his own farm, and they were all attacked with as much, and "in many cases more virulence than the older varieties." The information collected by the Chemistry Association is of a similar character. Twenty-five reports for 1845, state that potatoes recently raised from seed, were as much, and in many cases more affected by the disease than the old kinds; and only *two* individuals give it as their opinion that the new kinds have shown any exemption. The reports of the same Association for 1846, show still stronger against the assumption that seedlings have any superiority in resisting the disease.

We would not, however, discourage the raising of new varieties of fruits and vegetables. The greater the number of varieties, the better the chance of obtaining good ones by selection. But there is no value in new varieties merely because they are *new*, and we would not reject old ones, till we were confident they could be replaced by those which are *better*.

MANGEL WURTZEL AND CARROTS.—Dr. Thompson, who was employed by the Royal Agricultural Society to superintend some experiments in feeding stock, states that after trying mangel wurtzel for four successive years, he came to the conclusion that cows fed on it gave quite as much milk, but *much less* butter and cream than when fed on carrots or turneps; that when ewes were fed on mangel wurtzel the lambs did not thrive, owing to the poor quality of the milk.

A few years ago we had occasion to feed three cows during winter with several kinds of vegetables. We fed mostly with potatoes, giving each cow about a peck per day. On changing from potatoes to the same quantity of sugar-beets, the milk decreased, and was evidently of poorer quality. The beets were increased to half a bushel to each cow per day, and this brought up the quantity of milk to what it had been with the peck of potatoes; but the quality was still inferior, affording a less quantity of cream, and proportionately less butter, which was of a lighter color, of a less firm texture, and not so rich a flavor as that made while the cows ate potatoes. It is proper to say that about a quart of corn meal was given to each cow per day, through the whole trial.

WIRE WORM.—It is said that plowing late in autumn, and seeding two successive years with buckwheat, will destroy all wire worms in the soil. Another way is to summer-fallow very thoroughly, so as to starve them out, as they cannot subsist on the elements of soil.

DETAILS OF OPERATIONS IN FARMING.

EDITORS OF CULTIVATOR—In your remarks "To Correspondents, &c.," in your December number, wishing a continuance "of facts," relative to American husbandry, culture of corn, &c., &c., you say:—"The experience and observation of hard-working, common sense farmers is wanted." Now I am really in doubt whether I have a right to class myself as a "common sense *farmer*," (it being but five years since I commenced the farming business;) but I *do* claim to know something of "hard work," and never having furnished anything for the pages of "The Cultivator," I will now give you my "experience and observation," in raising corn, on "plain" or prairie land.

In the spring of 1845, I broke up with only two horses, about twenty-four acres of new plain. About one half was very *wet*, and the balance consisted of small spots or knolls, timbered with burr-oak. I had previously made a ditch from north to south, through the *lowest* parts, and plowed eastward so as to drain into the main ditch. I planted first week in May. It came up well, grew finely, and I had nearly finished working it the first time, when severe frosts, from 25th to 30th, cut it down, and to all appearance killed it. Seeing *all* my neighbors replanting, I, on the 1st and 2d day of June, run a plow between the rows, and replanted *on a line* with the former planting. In a few days most of the first planting started again; the balance of the season was good, and I harvested about fifty bushels per acre.

In the spring of 1846, I was enabled to plow much *deeper*, enlarged my main ditch and deepened my cross ditches, shoveling out on each side, thus making ridges of loose earth from fifteen inches to over two feet in depth. The corn on these ridges was much superior to the rest throughout the season, and when I gathered it I found the ears so large and fine, I saved them for seed. They had sixteen to twenty-two rows, and from eight hundred to one thousand, and some few over a thousand grains each.

In the spring of 1847, I had a very large pair of stout horses, and plowed from 8 to 9 and 10 inches on the landside, which left the furrows about a foot deep when plowed. This year I added three acres more of the timbered land, leaving the trees standing, (about thirty cords per acre) but girdled them; planted first week in May, three and half feet apart, without manure at any time; put 6 to 8 grains in a hill, which was at the first and second hoeing thinned out to four stalks. It came up well; the season was wet, cold and backward; the ground was so lumpy I could not harrow the young corn as I intended and generally do; weeds grew, but the corn was yellow. I began plowing and hoeing the last of May, when there came a very heavy freshet; the farm below me was not ditched, and I could not drain it; the water stood from a few inches to a foot deep on several acres. Full two acres was *killed out*, and about half of the whole remaining crop was much injured. On 10th June I began plowing the driest parts with mould board plows, and a *stout* horse at each, turning the furrows *from* the corn; and plowed *deep, up to the beam*. It required two hoes to keep up with each plow; after this working the injured corn began to grow again. Last of June cross-plowed again, turning the furrows from the corn, and *plowing as deep as a stout horse could plow it;* put three hoes after two plows and kept up. From 5th to 10th July, plowed third time, using long-pointed "shovel plows," with a swingle-tree but sixteen inches long—plowed still deeper, and brought up subsoil generally; one hoe kept up with each plow, running twice in a row. I like a shovel plow best—for the last plowing it cuts no corn roots, runs deeper, and leaves the earth more level and light between the rows. The season continued good, and the corn grew well until 12th September, when a hard frost killed all the green fodder, and slightly injured some of the corn. It was not sufficiently hard to gather until 10th October. Several persons told me it was the best piece of corn they ever saw. That injured by the wet never caught up with the other; that on the knolls was much the best, though the poorest ground. We have always estimated the field to contain thirty acres, three acres of which have never been plowed, and full two acres were killed out by wet—leaving twenty-five acres in corn, which includes the three of wood girdled, on which there was not over forty bushels per acre; and I husked out 2,573 bushels (shelled) sound corn, exclusive of small nubbins and soft ears, equal to 103 bushels merchantable corn per acre.

My potatoes have always been light, though planted on good soil. In the five crops I have raised, I never once got as many bushels per acre as I did of corn. Having planted them in April and first of May, I never had any to rot, though others complain much.

I mowed thirty acres of heavy timothy and clover, and made from sixty-five to seventy tons excellent *clean* hay.

My oats lodged and turned out slim. From five acres wheat, though much lodged, I got 142¼ bushels, cleaned up, of excellent quality.

I killed forty-two fat hogs of my own raising, from twelve to twenty-one months old, and they averaged a little over 300 lbs. each; from which I put up full six barrels leaf-lard. In addition to pasturing my own stock of twelve head of cattle and five horses, I have received between $70 and $80 (the past season) for pasturing cows from the village.

You know that five years ago last autumn, I took this piece of land "in a state of nature," without fencing or clearing, except patches of plain, and without buildings or improvements of any kind—a log cabin of one room excepted. I have plowed altogether about seventy acres, and have fifteen to eighteen acres in plain pasture—the balance in wood, a part of which affords some grasses. My farm is, I believe, now rated higher per acre on the tax duplicate, including my buildings, than any farm in this county. In all my undertakings I have been my own director, manager and foreman, as well as a *laborer;* still I fear I have but slight claims to the enviable distinction of "a farmer," and am still desirous to learn of those who have had more experience or better success.

I am of opinion that the subsoil plow would be a great improvement on our plains. They are mostly broke up with but two horses, and very shallow, and a large portion of them frequently *covered* with water for weeks together in wet season of the year; but so long as these rich lands can be had from $6 to $12 per acre, and will produce fifty to sixty bushels corn per acre with poor plowing and poorer tending, (sometimes never plowed or hoed after plainting,) I fear the introduction of subsoil plows will be delayed.

I am pleased to say that an increased number of subscribers have been obtained here for "The Cultivator," and also for the "Horticulturist." Having been a subscriber for the former from its first publication to the present time, I feel that to it I am mainly indebted for the success that has thus far attended my attempts at farming, and also in building, fencing, draining, seeds, &c., &c. J. S. COPELAND. *Marion, O., Feb.,* '48.

AGRICULTURE OF VERMOMT.

Editors of the Cultivator—I noticed that at the last meeting of the Oneida County Agricultural Society, Mr. Hitchcock in his address, spoke of the prejudice that still exists against what some are pleased to call book-farming. Farmers, he remarks, communicate the results of their experience in raising cattle, the most economical mode of manuring their lands, &c. "These results being printed, constitute the book against which such untenable and unfounded prejudice exists." If the results of the experience of the great mass of our *practical* farmers were printed, we should, I believe, have books quite as useful, though very different, from some we now have. That there are many interesting articles in our agricultural papers, no one will dispute. Those of Prof. Norton are of a practical character, and cannot well be too highly prized. But to follow the rules laid down by most of the writers would ruin nine-tenths of the farmers of Vermont. Gentlemen of large property, or high salaries, owning from 50 to 200 acres of land near a good market, may farm it *according to the book*, and talk learnedly of "rural architecture;" but in the latitude of Vermont, where the pitch-fork is kept bright seven months in the year, and where the farmer possesses no other means for the support of his family than what he obtains by his own industry, he finds it very difficult to manage his farm *according to the book*.

Our farming, I fear, is coming too much under that influence which governs our common schools. There is now twice as much expended annually in the support of teachers and building elegant school-houses, as was expended for that object 20 or 25 years ago. The public treasure was never more lavishly poured out, and yet our district schools do not flourish. The difficulty I apprehend can in some degree be attributed to the sources from which we draw our knowledge. Our teachers are taken too exclusively from our high-schools and colleges, and few of them have ever entered a district school-house. They understand well the higher branches of science, but know little of first principles. Few of our *farmers* who write for agricultural papers, ever hardened their hands with hoe or pitchfork, or brought up the cows from a lowland meadow barefoot in a frosty morning.*

But a small proportion of the farmers of Vermont are now able to make very extensive improvements, and it would be unwise to involve themselves in debt in their endeavors to imitate their more wealthy neighbors. Let the improvements commence upon scientific principles and progress gradually, and most of our impoverished farms may be made to produce bountifully at an expense far less than would be necessary to clear up a new farm, and erect the necessary buildings to make a family comfortable.

There is a spirit of improvement in the management of the farms of Vermont which, if properly directed, cannot fail to produce great and beneficial results; and no common observer of the times can fail to attribute the awakening of this spirit to the influence of our agricultural papers; and notwithstanding I may appear a little opposed to *book-farming*, I should rejoice to see every farmer in Vermont a subscriber to the Cultivator. Yet until our population becomes more dense—lands dearer—labor cheaper, and farmers richer, farming upon the European plan cannot be profitably introduced or practiced here.

Our lands which were once productive, experiments have demonstrated can be made as productive, by proper management, as when first brought under the plow. The natural strength of the soil is first spent by the production of grain. To restore the strength of the soil requires the exercise of the faculties of the mind, and a change in the mode of farming. When and how this change is to be affected is the important inquiry—much more important than to know how a great crop of corn—a *twelve pound fleece of "well-washed wool,"* or a great calf can be produced. For a good soil, with an abundance of manure, with a good team, and a good *hired* man, will produce the corn; seven pounds of gum and grease will produce the *well-washed* fleece; and two good cows a great calf.

My attention was first called to this subject by the removal of so large a portion of our population to the west. From 1820 to 1830, the increase of the population of Vermont was 40,000, from 1830 to 1840 only 11,000, and this increase was mostly confined to the manufacturing districts. It is also very evident that very few of those removed, have bettered their condition, after all the privation and suffering incident to a new settlement. I have lived sixty years on the farm on which I was born, and have witnessed the change in the mode of farming during this period, and the manner in which that change has been effected.

This was once a wheat-growing country. It produced as good wheat and as abundant crops as any of the western States. By a constant cropping of wheat for nearly half a century, the soil became too poor to produce it, and crop after crop failed. We then tried meslins [mixed crops;] then clear rye, and became bankrupt under buckwheat. A change in the mode of farming—starvation, or removal to the west, was forced upon us. The farms in general had become too poor to produce grass, and the farmer is too poor by the failure of crops to procure the small amount of stock the farms would then support. The utmost economy and industry were necessary to produce this change. The change has been effected, not by compost, for this, if they had known its value, the farmer had not the means to produce. The change has been effected, and those fields which were once covered with wheat are now covered with sheep. Vermont is now a stock and wool-growing State.

It would be well for the farmers of Western New-York to look to the history of Vermont. For the same process is now going on at the West that I have witnessed here. Their fields will not always yield their crops of wheat, and it would be much better to change, in some degree, from grain to stock, before the strength of the soil is entirely exhausted.

But I leave the New-York farmers to manage their own affairs, and attend to the farming of Vermont, which was my design when I commenced writing. From our system of direct taxation, I have been able to obtain a collection of facts, which if carefully examined will, I think, check that fever which has carried off so many of our most enterprising inhabitants. Some have been too much influenced, I fear, by the reports of the large crops of wheat which the Western lands produce. Many are ready to believe that farmer is most prosperous who turns off the greatest amount of produce, without taking into consideration the relation the produce bears to the capital employed. The table of statistics which I have prepared, shows the relative value of the improved lands in Vermont, and the value of stock and grain. All buildings and lots adjoining, not exceeding two acres, were appraised at their true value in cash, and set in the list at four per cent.; and all *improved* lands were in like manner appraised and set in the list at 6 per cent. All kinds of stock at a certain rate—oxen at $2 each, cows at $1.25, &c. From these lists we get the value of the improved lands, and the number of all kinds of stock.

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* We think our friend Pettibone is under a great mistake in this assertion. We speak more particularly in reference to the writers for the Cultivator, of whom at least five out of six are men who "hold the plow," and handle both "the hoe and the pitch-fork." They belong to the same class with Mr. Pettibone. They are men who have supported themselves and their families by the tillage of the soil—men whose good common sense has led them to adopt every suggestion by which their condition could be improved, whether it was received orally or from books.—Eds.

The value of stock and grain I have put at a price quite low, at this time, but near enough to its true value for the object I have in view—the relation the value of produce bears to the value of improved lands. The stock was appraised on the first of April—the hay, being consumed, is not estimated; nor is the value of the dairy put into the account. I have valued oxen at $25 each, cows $15, horses at $40, colts and young cattle in proportion. Yearling cattle were not appraised. I have put their number the same as two year olds. From this valuation, the stock, grain, and swine, exceed in value the value of the improved lands, without the buildings. The value of sheep at $2 each, with their wool on, exceeds in value any other kind of stock. The value of stock is to the value of grain nearly as 9 to 2.

I have also taken the value of improved lands, and stock and grain in the different counties; and I find the value of produce in a reverse ratio to the value of improved lands. Addison County improved lands are appraised the highest of any in the State, being $10 1-9. Caledonia County $6 per acre. Yet Caledonia County, with one-fourth less acres, and two-fifths less in value, has in value of stock and grain over $100,000 more than Addison County. The value of improved lands in Addison, Windham, and Caledonia Counties, stands

	Improved lands.	Produce.
Addison,	$10 1-9	$7.50
Windham,	7.34	8.53
Caledonia,	6.00	11.32

Addison County produces more hay per acre than any other County in the State. It produces about 112,000 tons, which will furnish at least twelve tons of hay to each acre of plowed ground. This with the straw and corn stalks, will make sufficient manure to keep the soil in a high state of cultivation, without resorting to artificial means of making manure.

The lands of Vermont, particularly the western and northern portion, are well adapted to grazing. The deep rich soil of the northern counties produces abundantly of hay and grass; and the numerous rivers which flow into Lake Champlain, by overflowing the intervales, spring and fall, keep these flats rich without the application of manure. The Otter Creek and Battenkill rivers, which run nearly 100 miles near the base of the Green mountains, overflow their banks annually. These intervales produce heavy crops of excellent hay without any manure. The pastures on the hills and mountains afford good range for cattle and sheep; and the hill and mountain pasture, though of little value for entire farms, when connected with the flats and intervale meadows, are nearly as valuable as the best lowland pasture. These rich hill and mountain pastures, can be purchased at from $3 to $8 per acre.

When we look at the low price of improved lands in Vermont, and their adaptation to the growth of cattle and sheep, we may as well expect a great outlay in making manure in Wisconsin as here. There are sections of Vermont that require more manure than can be made from stock, so long at least as the plow is used so much. There are less natural meadows, probably, in Windham County than in any other in the State; and that county is the only one that has, as far as I have been informed, offered a premium for the best heap of compost manure. There is, no doubt, more manure made in that County than any other in the State, or in all the other Counties. I have never seen a heap of compost in Addison County, which is considered naturally the best grazing County in the State. The value of stock there to the value of grain is eight to one. With all these natural advantages in favor of Addison, Windham County, with but 3,000 acres more improved lands, has 3,000 oxen, 4,000 cows and three year old cattle, and 200 horses, more than Addison County, and nearly twice as much grain.

These facts may, in the opinion of your able correspondent from Brattleboro, favor book-farming, while others, more intimately acquainted with the habits of the farmers on both sides of the mountain, will attribute this increase in the value of produce in Windham County to the industrious habits of the farmers on that side of the mountains; for there is, I think, twice as much labor performed annually by the farmers in Windham County, as is done by the same number of farmers in the counties of Addison, Rutland and Bennington.

But without going into the investigation of the comparative merits of different counties, if we look at the produce of the State as a whole, or by counties, it will appear that a greater value of cattle and grain is produced in Vermont, from the same amount of capital employed, than in any other State in the Union; and the amount of produce will, in the course of a few years, by means of the different lines of railroads now in progress, be doubled in value. J. S. PETTIBONE.

AGRICULTURAL STATISTICS OF VERMONT.

	State.		Addison County.		Caledonia County.	
	No.	Value.	No.	Value.	No.	Value.
Improved lands, 1,269,260 acres,	....	$10.594,561	123,866	$1,262.935	90,909	$556,004
Buildings, house lots, &c.,	....	8.160,808	....	750,896	....	600.847
Mills and stores,	....	1.163,995	....	110.000	....	66.305
Oxen at $25	32,378	809,450	1,800	45,000	2.970	74.250
Cows and three year olds, at $15,	141.767	2,150 720	11,656	174,846	12.204	183.060
Two years old cattle, at $10,	45,016	450.160	3.227	32,270	4.173	41.730
Yearling do. at $5,	45.016	225,080	3,227	16,135	4.173	20,865
Horses, at $40	51,762	2.070.480	4,451	178,040	4,674	186.960
Two year old colts, at $25,	7,154	177,841	516	12,900	....	20.100
One year old do., at $20,	4,068	81,360	182	3,640	....	10.520
Stallions, at $200,	91	18,200	3	600	15	3,000
Jacks, at $100	24	2.400	....	....	....	....
Sheep, at $2,	1,681.819	3,363.638	177,035	354.070	57,694	115.388
Swine, at $2,	203.800	407.600	14,305	28,610	18,991	37,982
Wheat at $1 per bushel,	465.800	465,800	31,322	31.322	57,694	57.694
Rye, at 50 cents,	230.933	115.460	11,427	5,763	1.800	900
Barley, at $50 cents,	54,781	27,391	256	128	12.291	6.194
Oats, at 25 cents,	2.222.584	555,646	141,794	35.448	342,433	85,608
Indian corn, at 50 cents,	1.119.678	559,834	95.304	47.652	52.350	26.175
Buckwheat, at 50 cents,	228,416	114,208	7,219	3.609	1.205	6.002
Potatoes, at 12½ cents	8.896.751	1.112.094	440.097	55.012	1.006 848	158,331

Total value of the live-stock of the state, $9,756,939. Total value of grain $2,950,439. Value of live-stock in Addison County, $846,105; value of grain, $178,934. Value of live-stock in Caledonia Co., $693,855; of grain $340,855.

Average value of improved lands, with buildings, for the state, $14.90 per acre; average value of the same for Addison County $17.62½ per acre—without buildings, $10.11 per acre; average value of improved lands, with buildings, in Caledonia County, $13.50 per acre—without buildings, $6. *Manchester, March* 30, 1848.

AGRICULTURAL SCHOOLS.

THE subject of establishing institutions for giving instruction in sciences especially connected with agriculture, is attracting much attention. It has been a mooted question (in legal phraseology) whether *new* institutions should be formed for this purpose, or whether the instruction should be given in our present colleges. Prof. C. U. SHEPHERD, of Amherst College, in his excellent agricultural address, delivered last fall at Springfield and Northampton, made some observations in reference to this point. He thinks it the duty and interest of the landowners of this country to lay a broad basis for the scientific training of the rising generation—that the *elements* of the physical sciences should be taught in our common schools—and that there should also be established a "class of *higher* institutions for the preparation of teachers, as well as for the thorough education in practical farming of those who have before them the prospect of managing large estates." He proceeds to speak more in detail in reference to such a school as is required, and his observations, which we quote, are worthy of careful consideration:

"Many persons appear to think, that our college course can be so modified, as to fulfil at the same time, the literary and the agricultural requisition. It does not appear to me that such a plan is likely to succeed. Heretofore most certainly, whatever else the college has afforded, it has turned out few practical farmers. Even those, who enter as well drilled and expert in farming operations, by the time they reach the terminus of their course, if they do justice to the college studies, and became thoroughly imbued with the spirit of the place, become rather awkward on the farm; and it soon begins to appear, that to be college-learnt, is to be farm-unlearnt. And I hardly know of men more to be pitied, than those who from feeble health or any other cause, have failed in a professional or literary career (to prepare for which the college course is chiefly intended) and who are obliged to fall back upon the farm for a livelihood. In all the practical labors of husbandry, they seem to have lost the art of taking hold of things by the smooth handle; and their blunders in live-stock, are almost sure to make them the laughing-stock of their neighbors. Now there is nothing surprising in this, if we consider the object of college education. The college is not intended for persons who are to occupy themselves much with physical matters. Even the boys understand this perfectly well; and it is to be feared that not a few importune their parents to gain admission there from no higher motive than to get clear of muscular effort; though it is generally observed that such are equally shy of intellectual exertion. No: the college is the place for the training of persons, who, if they are ever to work at all, must do so through the medium of mind, as scholars, as statesmen, as clergymen, or in the medical or legal profession. Nothing can be more unreasonable than to suppose, that we see the practical use of the sciences to mankind in the lives of our college graduates. Why, the college course is chiefly made up of the study of the literature and philosophy of the ancients, to whom our sciences were a dead letter, and of the elements of mathematics and geometry, to which is added a sprinkling of metaphysics and logic, and considerable drilling in English composition and elocution. On these studies and good morals, the discipline and the honors of the college turn. Lectures are given indeed on some of the modern sciences, but less with a view to their bearing on the arts of life, than to the purpose of intellectual discipline and general accomplishment. No teacher would be tolerated, who should more than incidentally allude to any common use, like that of economical profit, that could be made of them. The college is not the place for learning rules of thrift. It pre-supposes a degree of independence; and in cases where this is not enjoyed, it takes it for granted, that money-making is to be held as a secondary consideration with all who partake of its benefits. The college graduate is never to seek glory in wealth, but in knowledge, and in usefulness of a lofty kind to his fellow men. This I take to be the true theory of the college. and of literary life in general. Both hold themselves at the most respectful remove possible from all contact with matter, and the every day labors of men engaged in the arts. I might perhaps afford you an illustration of the truth of this representation. A president of one of these institutions on being shown through the physical department of another, the best endowed in natural sciences of any in the country, on taking leave of the distinguished professor. who had been his conductor, begged to know of what conceivable use to mankind were all such provisions! Here was a distinguished scholar, at the head of an American college, who had got so completely away from matter, as not to be conscious that a knowledge of its properties was of the least utility to mankind!"

* * * * *

"The time has fairly arrived, when society should understand what it has a right to expect from the college; when it should know this at least, that it is not the most likely place to look for amelioration in the practical arts, especially in that of agriculture. The college has enough to do to qualify for head-work. There must be some other institution in which young men can be taught to work on matter as well as upon mind. To send a lad to college whom you intend to make a farmer, is putting him on the wrong track. The four years spent there would be an episode, a parenthesis in the preparation for active life on a farm. I say not that it would disqualify him from leading the life of a gentlemen, provided his means were sufficiently ample; but it would assuredly be a bad thing for him, ever to take off his gloves on a farm, after he had touched his diploma.[*]

"I should shrink from the attempt even, to draw out the plan of such an institution as is required to meet the wants of this greatest of all the branches of practical industry. To frame such a scheme will demand no small share of deliberation and forecast. No institutions are now in existence upon which they can be directly modeled."

We are happy to see that a bill has been introduced into the Senate of Massachusetts by Hon. J. T. BUCKINGHAM, for the establishment of the "Massachusetts

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[*] In these remarks upon the inadequacy of the college proper, for preparing persons for the practice of the arts, I trust that I shall not be thought wanting in a proper regard for these institutions. Having, either as pupil or teacher, passed the greatest part of my life in connection with the college, I can but accord to it the highest respect; and even filial affection; but this veneration is solely on account of the important and truly noble end it accomplishes, in laying the foundation of professional or literary eminence; and not on account of its direct service to the manual arts. These it never has embraced within its plan; nor is it easy to see how any change can ever be made in this respect, which shall fully answer the wants of practical men: although there is nothing to prevent the existence of an agricultural school in immediate connection with a college, whose scientific faculty might even assist in a school of arts, and in this way, materially abridge the expensiveness of such an institution.

Agricultural Institute." Mr. B. is Chairman of the Committee on Agriculture in the Legislature, and in submitting the bill referred to, he made an able report on the subject of agricultural schools in connexion with experimental farms. The same subject was also discussed at the weekly agricultural meetings held in Boston during the past winter. The general impression there seems to be that such institutions should be entirely disconnected with our present colleges and other literary seminaries. The Committee in the report observe:

"The project of establishing an agricultural school has, for many years engaged much of the public attention, and the committee believe that the time approaches, if it have not actually arrived, when the legislature may, with propriety, look upon it with favor, as a subject in which the honor and prosperity of the Commonwealth are involved. They have, therefore, found no difficulty in coming to the conclusion, that an institution should be founded forthwith, where agriculture may be taught as a science and practiced as an art; where new theories may be investigated and subjected to the test of experiment; and where principles, which have already received the sanction of successful practice, may be further inculcated and confirmed."

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"We know that the mass of those who, from choice or otherwise, follow the calling of the husbandman, are anxious to be supplied with all practicable facilities for obtaining the knowledge which will enable them to develop the resources of the earth, and to enjoy all the fruits which intelligent and scientific labor is capable of producing. And they appeal to the wisdom and liberality of the legislature to aid them in their efforts to institute a school, where agriculture, in its most extended sense, with all its kindred arts and sciences, may be taught, practically and experimentally, on a farm devoted entirely to that purpose, and without any connection with any existing academy or college in which a classical education is the prominent purpose of instruction."

The bill proposes to incorporate Edward Hitchcock, Wm. B. Calhoun, Sam'l L. Hinckley and their associates, as a body politic, for the purpose of establishing "in some one of the towns lying on the banks of the Connecticut river, or in a town immediately adjoining such towns, an agricultural school and experimental farm, with the above title, the object of which shall be instruction in agricultural science, and improvements in all the arts connected with the practice of farming."

A resolution is appended to the bill, which provides that, when the officers of the said Institute have obtained subscriptions in cash or real estate to the amount of $15,000, they shall receive from the State $5,000; and at the end of one year another sum of $5000; and at the end of two years from the date of the first payment, another sum of $5,000—"said sum to be used only for the purpose of carrying on experimental farming and instruction in the arts and sciences connected therewith."

Agricultural Papers.—A correspondent of the Ohio Cultivator, states the case of a farmer who lost $150 by neglecting to take that paper. He had taken it formerly, but concluded that he could do without it. After he had discontinued it, certain practitioners of Neurotomy on horses were traversing that State, and the paper cautioned the farming public repeatedly against the practice. But this farmer did not see these cautionary remarks, and suffered two fine horses to be operated upon, paying him ten dollars, which resulted in the entire ruin of his two horses. Farmers must not expect to be guarded against impositions, unless they inform themselves.

Diseases of Animals, &c.

Roup in Poultry.

This disease, frequently called in this country "swelled head," attacks both common barn-yard fowls and turkeys. The first symptoms are a watery fluid being discharged from the eye. The eyelids soon become inflamed and swell; and the swelling extends more or less over the head. A fetid discharge proceeds from the nostrils, which so obstructs respiration that the fowl is constantly sneezing and gasping. In bad cases one or both eyes are frequently destroyed. The disease is believed to be contagious, and as soon as a fowl is affected, it should be removed to some dry and comfortable place where there will be no liability of the malady being communicated to others. If many fowls are affected, it will be advisable to remove the whole of them, and wash their apartments with a strong wash of hot-lime. A writer in the English Agricultural Gazette, recommends as the best remedy, bathing the head with warm fomentations in which poppy-heads have been infused, and giving a preparation of goose-greese, (lard probably would do as well,) and chopped rue, mixed together—two tea-spoonsful for a fowl twice a day. For drink, the fowls are allowed water which has iron, or iron-rust and sulphur in it.

Medicines for Cattle, Horses, &c.

Mr. R. S. Ransom, of Perryville, N. Y., writes that he had found much benefit from the use of the cattle-medicines prepared by Dr. C. S. Toms. His "Russian liniment" for bruises and sprains, is said to be not only valuable for horses and cattle, but for the cure of rheumatism, &c., in the human race. His "condition powders" are highly spoken of. Mr. S. observes—"The above medicines, coming as they do from a good farrier, I much prefer to trusting animals in the hands of ignorant and conceited quacks." Mr. R. states that he is no way interested in the sale of the medicines, but from having known them used for a long time in the vicinity where he resides, is induced to recommend them for the benefit of the public.

To kill Lice on Cattle.

A correspondent of the *Mass. Plowman* states that the easiest mode of destroying lice on cattle, is to card the cattle till the card is filled with hair, then pour spirits of turpentine on the card, and card the cattle again—placing the card first on those places where the lice are most numerous. He says by following this course once in 3 or 4 days, the lice will disappear.

Leprosy.

The same writer as above mentioned, gives the following receipe for the cure of a disease in cattle called leprosy:

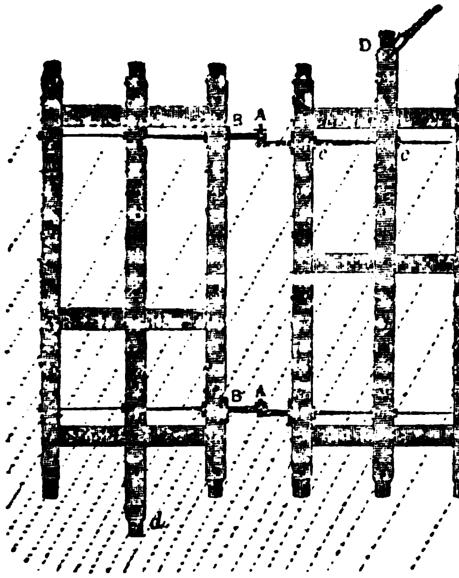
Put a piece of lime the size of a goose egg, into a tight vessel—pour in four quarts of hot water, and cover the vessel with a cloth—I do not vouch for the truth of it, but it is said to be better than when the vessel is left uncovered. When it has become cool, turn off the clear water, and wash the disordered spots two or three times with it, which is all I have found necessary to work a cure.

Heaves in Horses.—It is said that horses may be greatly relieved, if not cured, by the use of chopped straw instead of hay.

Sale of Hereford Cattle.—At a late sale of the herd of T. Cooke, Hereford, (Eng.,) one bull sold for £142, ($710,) another for £88, ($440,) a yearling bull £56, ($280,) and another for £52, ($260)—one cow for £70, ($350.)

HINGE HARROW AND CULTIVATOR.

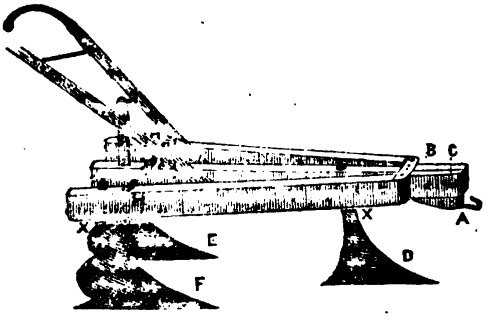
MESSRS. EDITORS—At your request I hasten to give a drawing and description of my Harrow and Cultivator, to which allusion was made in my communication in your March number upon the culture of corn. I do not know who to credit with the invention of my harrow. It was made somewhere in Jefferson County, N. Y., I believe, and I bought it of a man from that section. It is by far the most effective harrow I have ever used; doing as thorough work at once in a place as the old-fashioned harrows will at three times—particularly if the surface of the ground is somewhat uneven.



Hinge Harrow—Fig. 41.

DESCRIPTION—The harrow is composed of two pieces of frame-work connected by hinges. The bars or stiles are 3 by 3 inches of white-oak timber, and connected together by slats as represented in the cut. The ends of the bars are rounded and secured from splitting by iron bands. The hinges A A go together like common barn-door hinges; they come to a shoulder against plates of flat iron nailed on to the wood-work at B B. The hinges pass entirely through the frame-work—gradually tapering—with nuts screwed on at C C C. There are two points of draft, D d, which is quite an advantage; because when the teeth get dull or dubbed off by constant use in the direction D, it is only necessary to hitch on to the other point d, and you have sharp teeth again. There are thirty teeth in the implement, and it harrows down very fine; and yet it will readily be seen that no two teeth are so near together as to be troublesome about clogging. My harrow is 5 feet long, and 5 feet 3 inches wide; with teeth of 3-4ths iron. For harrowing in grain and grass-seeds, it may be made lighter—say of some light, smart timber not over 2½ inches square, and the teeth 5-8ths of an inch square.

The annexed cut represents my Cultivator. It is a patented implement, by Woods, Bates & Wells, somewhere in the State of New-York. An agent for selling rights passed through this town a few years since and sold the right of making and vending for this vicinity to a fellow townsman. At my suggestion, he made some alterations in his patterns which I deem of importance. In the first place, the teeth are made longer from the frame-work to the ground, which obviates the objection of clogging, for now there is space for any impediment to rise along up the teeth and slip off, without getting bound in, at the point of contact of the iron and wood at X X. The space from the bottom of the wood-work to the bottom or sole of the tooth is 11 inches, while most cultivators have not a space of more than 6 or 8 inches. In the second place, the teeth are made fast in the frame with a large thread and nut on the top, the advantage of which will be hereafter noticed.



Cultivator—Fig. 42.

DESCRIPTION—The point of draft A, is the continuation of a wide, thin piece of iron, secured by two bolts B C; and by taking out the bolt C the point of draft may be raised or lowered,—thus altering the depth of the work—and other holes in the iron admit this bolt through it and make all fast. The forward tooth D is a double mould board. The teeth E F are single mould boards or miniature plows; and at weeding-time they are reversed, thus turning the earth and all large clods, that might otherwise roll over on to the young and tender corn, away from the hills, thereby enabling the holder to work up close to them without danger of burying them up. At the next hoeing, the teeth are replaced, as seen in the cut, and the earth is turned towards the corn. The frame may be expanded, or contracted, at pleasure, by loosening the nut and bolt at G, and putting through other holes in the straps of iron H H. As the frame work is expanded or contracted so must the points of the teeth E F be altered to correspond, or travel in a proper line; and it is only necessary to put them in the right direction, and then screw the nut on top down snug, and the teeth will be kept in their proper place. The points of the teeth are screwed on to the mould board the same as any plow-point is, and when they become worn may be taken off and new ones substituted. The cut represents the teeth as coming to a sharp point; but, in fact, they do not; they are squared off like a plow-point.

Brattleboro, Vt. March 28, 1848. F. HOLBROOK.

THE OIL OF BIRCH is said to be used in Russia for tanning leather; particularly for the skins of sheep, goats, calves, &c. Dr. Holmes, of the Maine Farmer, states that the peculiar aromatic smell of this oil, which is very pleasant, has the effect to keep out moths and other insects. He suggests that as there are plenty of birches of various kinds in Maine and other portions of the northern section of the country, the manufacture of this oil might be made a profitable business.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Sickly Foliage and Iron.

Many observers must have noticed the pale and sickly appearance which plants sometimes assume when in a diseased state. The restoration of these to a healthy condition, by the use of salts of iron, has been accomplished in numerous experiments by Eusebe Gris, of Chatillon, in France. That the sickly condition of the plants operated upon, bore a resemblance to that of the *Yellows in the Peach*, as known in this country, may perhaps be somewhat doubtful; but the success attending his experiments, and the beneficial use of iron on some diseased trees in this country, are such as to lead to the belief that it may prove of important benefit. The attention of the public has been particularly called to this subject in the Horticulturist, by A. J. Downing, its editor. A brief notice may induce some of our readers to repeat or modify the experiments. The iron was applied in the form of solutions of its salts, the sulphate, chlorate, and nitrate of iron; the sulphate (copperas) being chiefly used, at the rate of 3 or 4 drams to a quart of water, if for watering the root; or at the rate of only quarter of a dram to a quart of water, if for syringing the leaves.

The experiments on plants in pots, where the solution could be easily applied to the entire roots alike, were eminently successful. Some species of *Pelargonium*, *Stachys*, and *Malva*, by two or three waterings of a gill to a pint each, entirely recovered their healthy green color in three weeks, though quite yellow at first; a *Diosma* required two months; and a *Pimelia* regained its color but imperfectly. In the open ground, the application to the roots is more difficult, and the results consequently more uncertain; but it was found, however, that a bush of the *Napæa levis*, very badly diseased, was quickly changed to a healthy state.

When the weak solution was applied directly to the leaves of such plants as are most quickly affected, a single application produced a renewal of the green in two or three days, wherever the solution touched them; and in one case of a very badly discolored geranium, "every line painted on the surface of the leaf by a brush, was rendered beautifully distinct through the intensity of the green color." For producing an *immediate* effect on diseased trees, syringing the leaves is considered preferable.

Very favorable results were obtained when the process was applied to sickly pear trees with discolored foliage.

It was remarked during these experiments, that when the solution was applied to the roots, and consequently ascended through the stem, branches, petioles, and midribs of the leaves, the parts of the leaves nearest the nerves or midribs were first changed in color, and the veins or minuter ramifications afterwards. On the contrary when the coloring was applied to *surfaces* of the leaves, the portions colored were distributed in patches without any relation to the nerves or veins.

The editor of the Horticulturist states that Dr. Reed of Poughkeepsie, applied iron in the form of blacksmith's scoria and cinders, to the soil about his pear trees, and the result was a remarkably healthy growth and fair fruit; his practice being founded on the fine condition of the pear tree in the iron district in the eastern States. He also says in a number published last year, "On learning, last autumn, with some surprise, the great perfection which the pear attains [at Plymouth, Mass.,] we applied to Mr. Washburn, one of the most successful growers there, for a sample of his soil. On having it analyzed, we find that this soil differs from other fertile soils chiefly in containing a much larger proportion of *oxide of iron*."

T. A. Smith of Syracuse, describes in the same work, a successful application of rusted iron turnings to the roots of a diseased peach tree, which soon restored it to health. The earth was removed from the roots; a peck of turnings applied, water poured on, and the soil replaced. This may be an over-dose; but the rust of iron is very slowly dissolved and absorbed by the roots. The disease was perhaps incipient *Yellows*, though this does not appear certain.*

These experimants may not uniformly prove successful—and they cannot be recomemended with the confidence resulting from long practice. But they are easily performed, and may lead to important and valuable results, and are hence well worthy of a full trial. It should be observed in all new experiments of the kind, that safety dictates a commencement with a small quantity, increasing the dose till the desired effect is obtained.

Experiments and their Results.

Editors Cultivator—With a little leisure, and yet without sufficient time to write an elaborate treatise on such profound subjects as "Potato Disease" and kindred themes, with which some of our craft are sometimes occupied, I send you a little of all sorts—pomological, horticultural, and economical. Please shovel this heap into your editorial mills, blow out the chaff, then, if any good seed remains, hand it over to your printer that he may sow it broadcast over the land. If some of this seed be of sorts of which you have sown enough already, you will of course reject it, or save it for next year. And if there should be danger that the sowing of such a diversity of kinds should produce cross-breeds, if sown altogether, you may distribute it to different departments of your editorial field.

I. Facts and Incidents in Planting Fruit Seeds.

1. Apples—In the spring of 1846, I planted a load of apple pomice in a good soil and with care. Not a seed ever grew either that or the next year. *Error:* The pomice was just sprouting when it was brought home. The disturbance ruined the seed.

2. Plums—The same spring I planted two or three quarts of plum stones that had been buried in earth in the garden all winter. Not a seed ever sprouted. *Error:* They were just sprouting when dug up. *Query:* Do plums always suffer thus when planted under such circumstances?

3. Cranberries—May 24th, 1847, I planted thirty square rods with cranberries. (*a*) *Seed*—Some of it was cleansed from the pulp in early winter and kept in sand in the cellar. The remainder was prepared on the day of planting by rubbing the berries in the sand in which they were planted. The fruit had been fine. (*b.*) *Soil*—The ground was a swamp muck combined with sand, drained dry three years ago and well cultivated since, but without any manure. Soil as fine as a garden. (*c.*) *Mode of planting:* The ground was first marked out for turneps, and that seed sown. The cranberry seed was then planted in alternate rows, at

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* One of the most infallible proofs of Yellows, is premature ripening and discolored flesh of the fruit, an indication however probably too late for a remedy.

two feet apart in the row. (*d.*) *Results:* Not a seed was ever seen to grow. *Query:* Was this ground too dry? I have sprouted these seeds in my house in a cup of black swamp earth kept constantly wet. Is this essential to their germination?

4. Mountain Ash—I have twice sowed these seeds. In one case the seed has been taken from the fruit in the fall, and kept in the cellar through the winter; in the other, the berry was burried in sand in the garden. *Result:* Not a plant grew. Can some of your correspondents tell me how I failed?

II. Grafting.

1. Pears on Mountain Ash, in May, 1847. The stocks were procured in the fall of 1845, from a swamp, and were planted in a dry sandy soil, made rich with a compost of muck and manure. In the fall of 1846, nearly two-thirds of them were found fatally injured by the common white grub, which had penetrated the tree just beneath the soil, and had worked upward, in some cases nearly two feet. Of those that escaped, sixteen were grafted with the Virgalieu Pear in the spring of 1847. They all but one started finely, and grew well until the middle of summer, when seven of them died, somewhat suddenly, without appreciable cause.

2. Grape Grafting in 1847—(*a.*) *Mode:* I sawed off the stocks 3 or 4 inches under ground, cut the tops smooth with a knife, split, and then put in the graft, usually with two buds upon it, cut to a wedge. When the cleft was weak I tied it firm with bass. About one half were clayed, though with no perceptible influence on the results. They were sheltered from the sun by a shingle. (*b.*) *Kinds and Results: Black Hamburgh*, two, in good Isabella roots—both died. *Golden Chasselas*, six, in roots as above—three lived, making wood from three to five feet; some with six or eight vines. *Royal Muscadine*, two grafts—one of which (a poor one) died. Wood too. *Early Black July*, about twenty-five grafts in Fox grape stocks, with strong roots. About one half lived, a few just living; but the most of them making four or five feet, one seven feet. of wood, with numerous vines. (*c.*) *Error:* I did not obey the instructions of those writers who say, "wait until the leaf is nearly fully expanded" in the case of summer grafting. Nearly every stock bled profusely. I should undoubtedly have gained by waiting one week. As it was, I think the bleeding of the stock prevented granulation until its top, and the graft too, were dead. *Query:* Would it not be better in this northern clime to graft early in the spring; especially when it is considered that the wood was, in this experiment, so immature that the first severe frost (Oct. 16th) greatly injured the young wood, killing it down almost to its origin. (*d.*) *Position:* The three first sorts were under the protection of a high board fence. The last were in the open field.

3. Grafting Grape cuttings in 1847. (*a.*) *Object:* The object is the same as in grafting, that is, to give vigor to tender grapes by putting them on strong native sorts. (*b.*) *Mode:* Take two cuttings, as the *Catawba* for the hardy sort, and the *Sweet Water* for the tender; have them of nearly similar size. Pare off one side of each, a little above the centre, on the side opposite the top bud of each, cutting the vines almost to the pith, making the wound very smooth, and about two or three inches long. Bring the flattened surfaces accurately together, securing them well with bass or yarn, either of which will rot soon enough. Then plant the cutting in the usual mode. (*c.*) *After treatment:* Let both buds grow for two seasons, at the end of which it may be presumed the union of the two cuttings will be perfect if ever. Then cut away the wood of the strong vine, giving the tender one the enjoyment of the double root. I have about thirty such grafted cuttings in progress. I have made no examination of them to ascertain whether there is an actual union of the two cuttings. (*d.*) *Supposed gain of this mode:* There is less difficulty in *timing* the operation than in grafting, and probably less danger of failure. But it will take another summer to settle the question of feasibility and utility.

III. Purification of Melon Seeds.

Few fruits are more acceptable in their season than melons. But if there be any other seed in the purchase of which the gardener runs so much risk, I know not what it is. And yet it requires but little labor, in the cultivator who has room, to keep melon seed pure, or to cleanse it when it becomes mixed. Those who have not abundant room, may raise a great variety of good melons the first year if they have good seed to start with, but they must not expect to do it the second year without a change of seed. It may be here premised, that melons kept pure exhibit very little change in shape and appearance, being, in this respect, among the most constant of fruits; nor yet do they change much in quality or flavor in successive years, if the seasons are favorable. The names of melons occurring in this article are used as I find them here at Utica. I make no pretension to learned accuracy.

Experiments with mixed Seed—1st. In the spring of 1844, I planted the Green Fleshed Citron Melon. As it ripened in August it exhibited an intermixture of the Honey Melon. By carefully selecting my seed from such hills as seemed to have no Honey Melons in them, I have succeeded in perfectly purifying this seed. 2d. In the spring of 1845, I obtained some seed of the Skillman Melon from Albany. It produced three sorts of melons—a large round, very early, and tolerably good Yellow flesh—a long oval Green flesh of fair quality—and a small flattened Green flesh of excellent quality, very nearly identical with the New Jersey Rock Citron, though a little earlier. 3d. I have tried another experiment, which is too long for detail here, in which I succeeded in separating from *a single melon*, presented me in the fall of 1845, three distinct varieties of Yellow flesh, one of White flesh, two of Green flesh, and one of pumpkin or squash—in all seven, two of which I shall continue to cultivate. The others are not sufficiently valuable to be perpetuated, especially as I have others quite as good.

I think it evident from the foregoing facts, that the intermixture of melons, and probably of all classes of plants called popularly *vines*, is not very intimate, since they are so easily separable. Persons who forward their vines under glass, and keep them covered until the fruit begins to set, may always secure good seed by artificially impregnating the early sets. I have done so, nearly invariably for some years. The labor is small compared with the advantages. The mode of doing this, though described in the books, is seldom practiced. It will bear repetition. In the morning, as soon as the dew is off, collect a few staminate blossoms, in such as have long stems, and never exhibit an embryo fruit below them. Then search your vines for the pistillate flowers, i. e. those with short stems, and having a small hairy fruit below them. Having found a pistillate flower just open, take a staminate one between the thumb and finger of one hand, while with the other you carefully pull off the leaves of the flower, being careful not to disturb the organs in the centre of it. Now take hold of the pistillate flower with one hand while with the thumb and finger of the other, you gently twirl the prepared staminate flower which you have at hand just within it. The object of this operation is to sprinkle the dust of the staminate flower, upon the central portions of the pistillate ones. This being done successfully, the pistillate flower will soon begin to enlarge, while, if unsuccessful, it will turn yellow and die. One thing should not be forgotten—staminate flowers are not only much more numerous than pistillate, on all sorts of vines, but begin to appear one or two weeks earlier, and are most numerous the whole season.

IV. Choice of Melons.

He who has once tasted a good Green Flesh Melon, will rarely long for a Yellow one. "But of the *Green* which are the best?" I answer that between the Green which I have cultivated, there is but little room to choose in regard to flavor. Yet to the cultivator it is important to make a wise selection. The *Persian* is a little the earliest, and requires the most care, as it should be watered almost daily in a dry season. Its fruit also fails rapidly in quality on the approach of autumn. The *Skillman* is somewhat liable to crack and rot, especially in wet weather. The *Honey* Melon is too small for a market melon. The *New Jersey Rock Citron* is the latest melon we have, and therefore it is not so eligible as some others. The *Citron* remains to be noticed. It is usually the largest of all fine Green flesh, is more uniformly good in all seasons, and holds its qualities at the approach of autumn far beyond any melon of my acquaintance; often presenting a bright green luscious flesh when all others have become pale and vapid. I have said nothing here of the Minorca. When ripened in very hot weather it is often of fair flavor, but it so uniformly cracks before it is ripe, and so loses all flavor at the first approach of cold weather, that I consider it worthless; though to the eye it is the most magnificent of all Green melons, sometimes reaching with me the weight of nine and a half pounds.

I have said nothing of the *cultivation* of the melon. That, in so cold a climate as that of Utica, would alone become the subject of a long article.

I subjoin a description of the principal melons referred to above.

1. The *Honey*, very small, white, round, smooth; very thick meated, of most delicious flavor.

2. The *Skillman*, as purified in my hands, is small, flattish, has moderate sutures thickly netted on a green ground. (3.) The *Rock Citron* is much like the Skillman, only with deeper sutures, and more variable in size.

4. The *Persian* is oval, with a slight neck, thinly netted, on a green ground, which approaches a yellow when ripe. Its flesh is a little thinner than that of the preceding kinds, and not so deep a green. It has moderate sutures, and is larger than any of the preceding kinds.

5. The *Citron*. This melon is bluntly oval, larger than any other Green Flesh, except the Minorca, usually moderately netted, on a deep green ground, which changes but slightly as it approaches ripeness. It has a very obscure suture.

I think the community are greatly in danger of being gulled in the recommendation of melons. Should a pomologist make the tour of Persia, Afghanistan and Egypt, he could not find melons which, when brought home and cultivated here, would be superior in flavor to almost any one of the fine good varieties noticed above. He who wisely cultivates them in a hot sand, in a warm and long season, will have fruit as rich as a *Peach*—as rich *as can grow* in this country. Ordinarily they should be forwarded in a hot bed, so that they may ripen under a July and August sun.

V. Melon Squash.

This is a hybrid between the Green Fleshed Melon and the Seven Years Pumpkin. The latter, for some reason, had not with me answered its character abroad either in the richness of its flavor, or in its duration. In the July of 1844, I impregnated about fifty of its pistillate flowers with the staminate of some of my varieties of the Green Flesh, although I did not notice which. The flowers were covered carefully with paper, immediately after impregnation, to exclude bees and flies. About six or eight were successful. The fruit was not altered in size and appearance that year, but the seed was, as it became thicker and more stubbed than the original seed of the Seven Year Pumpkin, while its color became exactly that of the melon seed. In 1845 I planted seed from four specimens that seemed most changed by the crossing. In consequence of very dry weather and neglect, all these failed but one. This one produced largely. From its crop I selected a few specimens that combined the Nankin Yellow and pale Blue of the Pumpkin with the knotty and netted appearance of the Melon. These and others like them were planted in large quantity for market in 1846 and 1847.

The *Result* is a rich, thick-meated Squash, (or *Pumpkin* if you please,) much richer than its Pumpkin parent, with a yellow, almost red, flesh. This Squash is not so long a keeper as the Pumpkin from which it was derived, but is to me a more valuable variety.

I remark on Squashes, as I did upon Melons, that the public are perpetually amused with intelligence of new and extraordinary varieties. Mammoth Squashes are valuable only to look at. For the table they are comparatively less valuable than "Still fed Beef." Any one who has a rich spot of moist ground, can grow a mammoth Pumpkin; but when grown it is far less valuable and deserving of a "State Fair Premium" than a great crop of corn. The true *Valparaiso Cheese* and *Winter Crook Neck*, and my Melon Squashes are, I apprehend, as rich and valuable varieties as our climate can ever produce. They have the advantage of moderate size, and this is not a small one either to the cultivator or the consumer. Let us hold on to them, and discard new varieties unless they are recommended by an old wholesale cultivator in the most unqualified manner. In the hands of a tolerably careful gardener, Squashes need never run out. A good corn season will almost always give good winter Squashes, if they are planted early so as to mature, like the Melon, *in the very hottest weather*, or if not absolutely to *mature*, at least to get the most of their growth during this season. Squashes are sometimes rejected because, being planted one season, they fail. I had a valuable Squash that was not eatable in 1840 and 1841, which, both before and since, has been very fine.

Improvement of Varieties.

A writer in the Gardener's Chronicle gives some interesting results of experiments in improving the varieties of vegetables. He began with long pod beans. He took for seed, none with fewer than five seeds in a pod. The following year there were many six seeded pods, and some with seven. Still selecting the best, he procured many six and seven seeded pods, and some with eight. In this way new and distinct varieties were formed; for while some remained with five seeded pods, it was found that they rarely had a six seeded pod upon them; while those with six seeded pods were nearly all so, and some seven seeded. New varieties are only produced from seed; hence the importance of a constant care in selection in all crops which are annually reproduced in this way. A skilful market gardener in Western New-York, by constantly selecting the earliest seeds of the Washington pea, in a few years had them more than a week earlier than his neighbors, who had cultivated the same variety. Plants not reproduced by seeds, as the potato by eyes or tubers, and fruit trees by grafts and buds, remain perfectly unchanged for ages; for this is only a continuation of the same original plant, which cannot change its own being.

Insect injurious to the Grape-Vine.

CHAS. W. MULFORD, of Rensselaerville, N. Y., has sent us some insects which he states are very destructive to the grape-vine. He says:—"They commence their ravages in the spring, as soon as the grape buds begin to swell, eating a portion of each bud, and so maiming as to destroy its growth. They continue to destroy the buds as fast as they appear, till about the end of June, when they begin to disappear. My father has a vine which has borne upwards of two bushels of excellent Isabella grapes annually; but for the past two seasons it has not borne a single grape, and indeed has not shown its leaves till July, from the fact that its buds are destroyed up to that time by the insect. After the leaves show themselves, they are much eaten throughout the season by a minute worm or slug, but whether this has any connection with the former insect, I have not examined sufficiently to determine."

The insect sent us is a species of beetle, of a greenish black color, about a fourth of an inch long and an eighth of an inch wide. Its name we have not ascertained. We have never known such an insect to prey on the vine, and cannot say whether the slug spoken of is the larva of this beetle or not. As to a remedy against their ravages,—our correspondent states that the beetles were found in great numbers among the dried leaves under the vines, and these might, of course, be destroyed by raking them up with the leaves and burning them. Syringing the vine with tobacco water, fumigation with tobacco or sulphur, scattering over the buds and leaves air-slacked lime or plaster, might destroy the slugs, and perhaps keep the bettles away. *

Destruction of Fruit Buds by Frost.

The destruction of the buds of peaches and other tender fruits frequently occurs in this latitude, under severe cold. It has been remarked in peach growing neighborhoods, that whenever the mercury falls below zero for several days, the fruit buds are killed. It is probable, however, that the precise *degree* of cold which is required to produce this effect is not generally known. It is generally supposed that the destruction depends somewhat on the *continuance* as well as on the degree of cold. For instance, it is thought that five nights with the mercury at zero may cause as much injury as would one night with the mercury at ten degrees below zero.

C. H. Tomlinson, Esq., of Schenectady, has paid much attention to this subject. The substance of his observations, as communicated to the writer in a late conversation, may be given as follows:—That when the mercury for only one night falls to zero, a few peach-buds will be killed; that when it falls to four or five degrees below zero for the same time, a larger proportion of the buds are killed; and when it falls as low as twelve to fifteen below, a "clean sweep" is made of the buds of the peach, nectarine, apricot, &c.

The question has been raised whether, if the ground was prevented from freezing by snow, the same degree of cold would produce the same injury to the buds. Mr. Tomlinson has made some observations on this point. Several years ago there fell a deep snow before the ground was frozen at all, and where the snow remained undisturbed the ground did not freeze under it. Of course the roots of trees were in unfrozen ground. While this state of things existed, very cold weather occurred—the mercury falling to ten degrees below zero. The usual consequences followed—the peach-buds were generally killed. In some instances the lower branches of the trees were buried in the snow, and on those branches the buds were saved, blossomed, and produced fruit the succeeding season.

The morning of the 11th of January last was remarkably cold—the mercury, in this neighborhood, ranging from 18 to 23 degrees below zero. Mr. Tomlinson states, the fruit-buds of the trees above-mentioned, around Schenectady, were all killed at that time. A good illustration of the appearance of peach-buds when killed by cold, will be found in the Cultivator for 1846, page 183. *

Singular Circumstance.

At Wyalusing, Bradford County, Pennsylvania, many years ago, a thrifty young apple tree was innoculated with buds of the Golden Pippin—three branches, changing the whole head. When the tree began to bear, it was found that one of the branches ripened its fruit *in July*, and the others in October—all Golden Pippins. Many persons applied for grafts of the early branch, but the owner discouraged them; supposing that the cause of this singular variation existed in some defect of the stock *in that branch*, and that grafts taken from it would possess no property different from the original Golden Pippin. However a son, having less faith in the stability of natural law, tried the experiment privately, and on the third year brought in seven early Golden Pippins from the new graft. We now suppose that in this new way a new variety of early fruit is added to our stock as much superior to other early apples as the fall Golden Pippin surpasses them. Scions of this singular variety have been sent to Tharps' Nursery, Binghampton, New-York, where inquirers may obtain it. C. F. WELLES. *Wyalusing, Penn.*

Culture of the Blackberry.

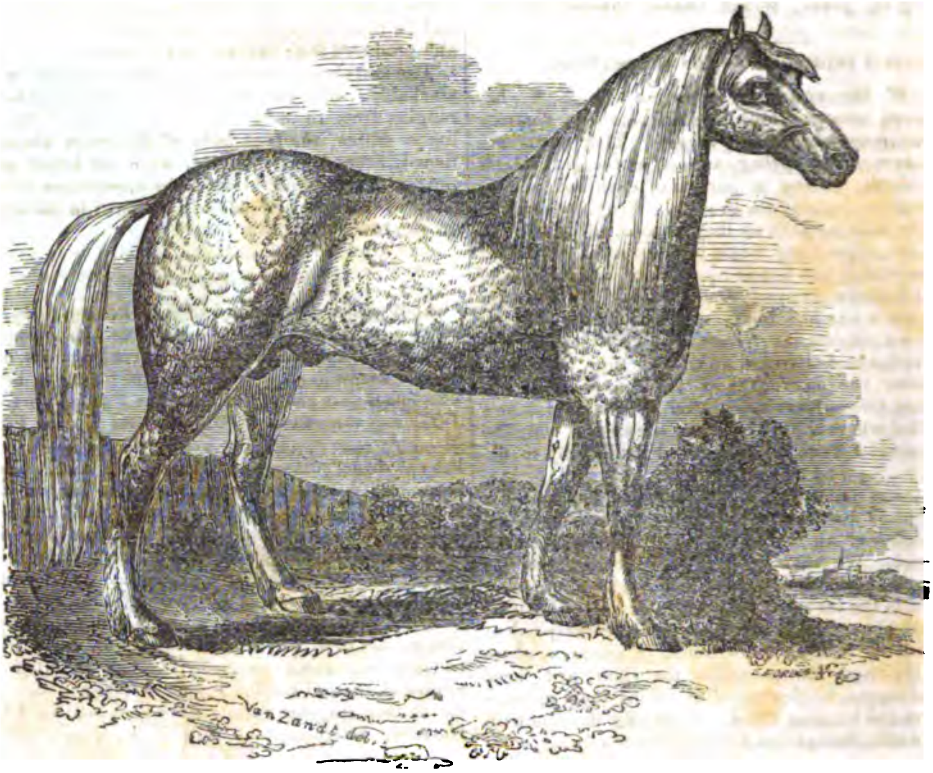
Having seen an inquiry respecting the culture of the blackberry, I will send you the method which is practiced by a friend of mine, who has a beautiful hedge which produces a great abundance of this excellent fruit.

The plants are set out in rows four or five feet apart, and are kept free from weeds and grass through the summer; in the fall these spaces are filled with leaves from the forest. The next spring a quantity of ashes is strewn between the rows—these with the leaves are all the means used to secure a beautiful harvest every season. W. H. *West Bethel, Vt., March* 28, 1848.

THE WHITE DOYENNE, or *Virgalieu Pear* in Ohio. C. Springer, well known as a cultivator of fruit in Muskingum County, Ohio, says, "The White Doyenné pear is the only grafted variety, out of several kinds, planted eighteen years ago, that has sustained itself against the blight. It is a regular and plentiful bearer, and among the very best of pears."

PROFITS OF FLORICULTURE.—M. P. Wilder, President of the Mass. Hort. Society, raised two new varieties of the Camellia, of such unsurpassed beauty, that he sold the stock of these two seedlings to J. L. L. F. Warren, for *one thousand dollars*. They were taken to Europe, and sold for about *fifty dollars a pair*, to the amount of nearly *three thousand dollars*. This will not appear so extravagant, when it is remembered that by a few years' increase, these purchasers may dispose of the increased stock at ordinary prices, and make a handsome profit on their purchases.

PEARS.—At the autumn exhibition of the Massachusetts Horticultural Society, R. Manning exhibited two hundred and fifty varieties of pears, and M. P. Wilder, the President of the Society, exhibited a hundred and fifty varieties.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THE NORMAN HORSE.

The above engraving represents the Norman horse, called *Louis Philippe*, bred by **Edward Harris** Esq., of Mooerstown, N. J., and now owned by Mr. R. B. **Howland**, of Union Springs, Cayuga County, N. Y. He was foaled in 1843. His sire and dam were selected in France by Mr. **Harris** in 1839.

The origin of the most esteemed variety of the Norman horse, is said by French writers to have been a cross, made several hundred years ago, between the celebrated Andalusian stock of Spain, and the old Norman draught horse. The Andalusian was derived from a cross of the Arabian or Barb, introduced into Spain by the Moors during their occupancy of that country from the eighth to the sixteenth centuries. No breed in Europe, is more fixed in its characters, or transmits its peculiar traits with more certainty, than the Norman.

This is the variety of horse which is preferred in France for drawing the ponderous stage-coaches called "diligences," and travellers, on passing through the districts where they are used, frequently express their astonishment at the performances of these animals. We have been informed that each of these vehicles is calculated for carrying eighteen passengers at once, and that when thus loaded they are equal to five tons' weight. Five horses (all stallions) are, with rude harness, attached to the clumsy and cumbrous carriage; and their regular rate of movement with this enormous load, is seven miles an hour. The pace is generally kept up over the various acclivities, but occasionally, when a very long hill is to be ascended, an additional horse or two is added to the team.

On some routes the loads are lighter, and the pace is there quickened to eight or nine, and in some instances to ten miles an hour.

Mr. **Harris** was induced to import this valuable breed of horses from having become acquainted with their qualities during a residence in France; and Mr. **Howland** was also led to make the purchase of one of this stock from having been convinced of their great superiority, for many purposes, by seeing them in their native country.

Perhaps a better description of this breed cannot be found than has been given by a writer in the twelfth volume of the Scottish Quarterly Journal of Agriculture. He says:—"The horses of Normandy are a capital race for hard work and scanty fare. I have never seen such horses at the collar, under the diligence, the post-carriage, the cumbrous and very heavy voiture or cabriolet for one or two horses, or the farm cart. They are enduring and energetic beyond description; with their necks cut to the bone they flinch not; they put forth all their efforts at the voice of the brutal driver, or at the dreaded sound of the never-ceasing whip; they keep their condition when other horses would die of neglect and hard treatment.

"A better cross for some of our horses cannot be imagined than those of Normandy, provided they have not the ordinary failing of too much length from the hock downwards,[*] and a heavy head. It is very doubtful whether the infusion of much English blood among the Norman breed will be serviceable. I have seen many bad productions in consequence of this crossing, chiefly loss of weight and strength in those points where the draught horse should excel."

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[*] Mr. Howland's horse is by no means faulty "from the hock downwards," and we have been informed that his sire, *Diligence*, and the mares imported by Mr. Harris, have not this defect. Mr. Youatt's observation in regard to the cross of the Norman horse with English breeds, is worthy of notice. "The English roadster and light draught horse has not suffered by a mixture with the Norman horse."

MANUFACTURE OF CHEESE.

AT the January meeting of the New-York State Agricultural Society, 1848, Mr. ALONZO L. FISH, of Litchfield, Herkimer County, received a premium of fifty dollars, for an account of experiments made by him in the manufacture and management of cheese. Mr. F.'s valuable essay (as it may be called) is embodied in the elaborate report of the committee appointed by the Society to examine the claims of competitors under this head, and will be found in the volume of *Transactions* for 1847, when published. We think the following extracts from Mr. Fish's remarks, will be read with advantage by those of our readers who either are, or expect to be, engaged in cheese-dairying.[*]

Having been personally engaged in 1845, in some 60 dairies, which were located in thirteen towns and four counties, and more or less in the same manner the past two years, I have observed a marked difference in the capacity of soils for producing herbage, under different modes of culture, and the various conditions and treatment of cows, affecting their capacity for milk, both as regards *quality* and *quantity*. The inconvenient and improper fixtures, in many instances, for making and curing cheese, which are to be found, all unite in convincing me, that any set rules for making cheese would not be practicable, even with the most proficient cheese-maker; because,

In the first place, milk is a fluid very liable to be varied in quality by impure water, by damp and unventilated stables, change of diet, excess of feeding, excitement of temper, irregular milking, salting, &c., which destroy its susceptibility to produce like results.

2d. Cheese, when pressed and exposed in a *curing process*, is no less easily affected, and is equally liable to be varied in texture and flavor, by size of cheese, exposure to excess of heat, bad air, &c., the effect of which I shall hereafter notice. There are, however, leading principles which form the basis of operations, and should be closely adhered to, *in all cases*, in the process of manufacturing cheese. *Salt, Rennet, heat and pressure*, are the principal agents used in converting milk into cheese, the flavor and texture of which is determined by their proportionate use. Their proportion is varied by different dairymen, according to their notions of propriety, as best adapted to their fixtures, experience, &c. Hence arise the great inequalities in dairies, in the same neighborhood, and even in the same *dairy-rooms* may be found as many different qualities of cheese as there are of fruit in an apple orchard. Some of these are matured at an early period, while others mature later, and are unsuited to the same market.

Much of the cheese being contracted for before it is made, (in the early part of the season) both buyer and maker are liable to be disappointed, in the cheese being suited to the market for which it is designed, destroying the confidence of purchasers, and injuring the interest of the dairymen. It is therefore necessary, that makers should have sufficient knowledge of the science to determine the result of their practice, which cannot be learned from verbal instruction. It is by *practical experience and close observation only*, that the maker can learn to adapt his practice to the frequent and extreme changes to which our climate is subject, varying the quality of the milk, and materially affecting cheese in the process of curing.

The evening's and morning's milk is commonly used to make one day's cheese. The evening's milk is strained into a tub or pans and cooled to prevent souring. This is done by running water through a vessel set in the milk, or setting pails filled with cold water into the tub, and stirring till cool; but little cream will rise over night.

The cream is taken from the evening's milk, and kept till the evening's and morning's milk are put together, and warmed to receive the rennet. This is often done by heating a part of evening's milk to a temperature that will warm the whole mass. Both are objectionable, *because the natural affinity which is necessary to preserve between the constituent parts a perfect coherence*, is destroyed, by a portion of the milk being overheated. It is better to warm the whole mass in a manner that will produce an *equillibrium of heat*, which is best done by placing the vessel containing the milk within a large vessel, with two inches under the bottom, and one inch of space at the sides, into which space water may be put to cool the milk, and into which steam may be let to warm the milk and scald the curd. The more water surrounding the milk, the more uniform will be the heat. The cream, if added, (which is generally done,) is best incorporated with the milk, by putting it with twice its quantity of new warm milk from the cow, and add warm water to raise its temperature to ninety-eight degrees. Stir it till perfectly limpid, add cream to milk, and then put in rennet, that the same stirring may mix both at once with the same mass. If milk is curdled below eighty-four degrees, the cream is more liable to work off with the whey. *An extreme of heat will have a like effect.*

Curdling heat is varied with temperature of the air, or the liability of the milk to cool after adding rennet. A fine cloth spread over the tub while the milk is curdling will prevent the surface from being cooled by circulation of air. No *jarring of the milk*, by walking upon a springy floor or otherwise, should be allowed while milk is curdling, as it prevents a *perfect coherence*.

Rennet.—Various opinions exist as to the best mode of saving rennet, and that is generally adopted which is supposed will curdle the most milk. I have no objection to any mode that will preserve its strength and flavor, so that it may be *smelt* and *tasted* with good relish, *when put into the milk*. Any composition not thus kept, I deem unfit for use, as the coagulator is an essential agent in cheesing the curd, and sure to impart its own flavor. The rennet never should be taken from the calf till the excrement shows the animal to be in perfect health. The stomach should be emptied of its contents, salted and dried, without scraping or rinsing, and kept dry for one year, when it will be fit for use. It should not be allowed to gather dampness, or its strength will evaporate. To prepare it for use: into ten gallons of water, (blood warm,) put ten rennets, churn or rub them often for 24 hours, then rub and press them to get the strength, stretch, salt and dry them as before. They will gain strength for a second use, and may be used when the weather will admit of soaking them to get the full strength. Make the liquor as salt as can be made, strain and settle it, separate it from sediment, (if any,) and it is fit for use. Six lemons, two ounces of cloves, two ounces of cinnamon, and two ounces of common sage are sometimes added to the liquor to preserve its flavor and quicken its action. If kept cool in a stone jar, it will keep sweet any length of time desired, and a uniform strength can be secured while it lasts. Stir it before dipping off to set milk, take of it enough to curdle milk *firm* in 40 minutes. Squeeze or rub through a rag, anatto enough to make the curd a cream color, and stir it in with the rennet. When milk is curdled so as to appear like a solid, it is divided into small particles, to aid the separation of the whey from the curd. This is often *too speedily done*, to facilitate the work, but at a *sacrifice of quality* and *quantity*.

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[*] We have in previous volumes described the modes of making various kinds of cheese. A former essay of Mr. Fish's is given in vol. X. pp. 114, 129, 147. We would also refer to vol. I. new series, p. 133, and for the mode of making the English Gloucester cheese, to the same volume, p. 165. An article on "Cheese Dairies of Connecticut" is given in volume II, p. 283; and a description of the mode of making the English Cheshire cheese in volume III, p. 268.

The three *indispensable agents*, *heat*, *rennet and pressure*, rightly applied, must keep pace with each other in effect. The two former operating to subdivide, the latter to aid cohesion, by bringing the particles of a sameness closer in contact. This should be *skilfully* and *studiously* applied in a mild way, according to the capacity of the curd to receive it. The less friction in working the curd the less waste. If *heat is raised too fast*, or commenced while the curd is too young, the effect of the rennet will be checked, and decomposition will not be complete, and will result in a leaky cheese.

This often happens when steamers are used in small dairies. Heat may be raised in scalding *to keep pace with rennet*; if rennet is quick, heat may be raised quick; if slow, heat must be raised slow and held longer. Scalding heat may be carried from ninety-six to one hundred and four degrees, according to the size of the cheese, and temperature to which the cheese is exposed. During the process of scalding, the whey and curd should be kept in motion, to prevent the curd from settling and sticking together, as separating it is attended with great labor and waste from friction.

When the curd is cooked, so that it feels elastic and will squeak when chewed with the front teeth, it is separated from the whey to receive salt. This is done by dipping it into a strainer over a basket or sink, or drained off and salted in the tub. Either may be done without adhering in lumps, by stirring it in a small portion of whey, till cooled to 94 degrees. This is the most critical part of the process, where cheese-makers are most likely to err, as the portion of salt retained in cheese after pressing, will be in proportion to the capacity of curd to receive it when added. At a particular period and temper of curd, when draining off whey, it will absorb salt freely, and after being thoroughly mixed and packed up for a few minutes while warm, it will be evenly shrunk and cleansed by salt and whey, and will press out freely; but if the curd is *not well cooked*, or if it is cooled too fast in draining off whey, it will acquire a degree of stubborness, prevent the absorption of salt to shrink and cleanse, and *no amount of pressure* will be sufficient to drive out the fluid.

If curd is not worked even, the larger lumps will not be cooked enough, or the lesser too much, (like large loaves of bread and small biscuit baked together in one oven,) hence, the cheese is left impregnated with the elements of fermentation, which increase on being exposed to heat, till the cheese is sufficiently swollen, or huffed, for each constituent to occupy a separate space in the same shell or rind. The fluids are first attracted together by affinity, forming small cavities in which they remain *unaffected by salt*, become fetid, and generate an unpleasant odor, which is a fair proof of the quality of rennet used. Curd should be salted warm, as it is then more absorbent, and it should be thoroughly cooled before putting it to press, to suppress the combined action of *heat and rennet*. The quantity of salt required, varies with the condition of the curd, size of cheese, amount of heat to which the cheese is exposed in curing, and market for which it is designed.

A well worked cheese, from fifty to one hundred pounds, requires one pound of refined salt to forty pounds of curd, to remain in the cheese after it is pressed and exposed to a temperature of from seventy to eighty degrees. This may be varied from two to four pounds to the hundred, according to the texture of cheese required—small cheese requiring less, and large cheese more.

A degree of moisture is necessary in cheese for a malleable texture, but this should not be from *animal fluids retained in the curd*. A high salted cheese immediately exposed to high temperature, becomes sour, hard, dry and crumbling; the same exposed to a cool, damp atmosphere retains sufficient moisture to be soft, yet solid. A cheese light salted in a high temperature will cure quick, become porous, huffy and stale. *Curd from hay milk*, requires much less salt, than that from grass or grain feed, as it is poorer and will retain salt like lean meats. The richer the milk, the more salt is required to control the animal properties, and the *less absorbent the curd*, the pores being filled with the finer buttery particles.

More salt is required in hot weather also, to overrule the *combined action of rennet* and heat, *neither of which will be effective alone*. When curd is ready to press, it is important *to dispossess those decomposing agents*. The gastric juice (or coagulator) is a *fluid*, and works off with the animal fluids in whey; and the only way to get rid of it, is to work the curd down *fine and solid and work the whey all out*. Then cool the curd thoroughly before pressing, and the cheese will be solid and keep its place. But if the whey is not all out, the decomposer is yet on hand, continues its action (aided by heat) till *an equilibrium of chemical action is destroyed in the cheese*, and the fluid properties leak out in fetid whey and oil, leaving it a rank and worthless article. *In short*, the proper method of using salt must be arrived at by a close observation as to its *chemical combination* with the *constituent properties* at different ages of the cheese with different sizes, heat, dampness, &c. This, although an essential point, has not been sufficiently determined by chemical analysis to be reliable. (*To be Continued.*)

The Carol of May.

[The following song, the production of an English writer, was left with us by a friend for republication, sometime since. It seems appropriate to the present season:]

By the side of a mountain o'ershadowed with trees,
With the clusters of vines intermingled and wove,
I behold my farm-cottage, dear mansion of ease—
The seat of retirement, of friendship and love.
In the morn, when I lift up the latch of my door,
My heart beats with rapture to hear the birds sing;
And at night, when the dance in the village is o'er,
On my pillow I strew the fresh roses of spring.

Then I hie to the forest, from noon's scorching beams,
Where the torrent's deep murmur re-echoing sounds;
The herds quit their pastures to quaff the clear streams,
And the flocks of the vale lie extended around.
I muse, and my thoughts are contented and free,
I regret not the splendor of riches or pride;
The seat of retirement is dearer to me
Than the proudest appendage to greatness allied.

I sing, and my song is the carol of May;
While my cheeks glow with health like the wild rose in bloom—
I dance, yet forget not, tho' blithesome and gay,
That I measure the footsteps which lead to the tomb.
Contented to live, yet not fearful to die,
With a conscience unspotted I pass through life's scene;
On the wings of delight every moment shall fly,
And the end of my days be resigned and serene.

THE FARMER'S NOTE BOOK.

Culture of Carrots and Corn for Fodder, &c.

About the time I commenced doing a little business for myself in the way of farming, in the early part of 1846, a friend of mine solicited me to take the Cultivator. Not having a ready command of that harsh little word *no*, I consented as a matter of courtesy to take it for *one* year, as the expense was not very great. At the end of the year I was not quite ready to spare the Cultivator, and concluded to take it one year more; and at the close of 1847, I concluded to subscribe for the next volume, and prevailed on two or three of my neighbors to "do likewise." Is it asked what I have found in its pages to repay the trouble of perusing and the cost of paying for it? I reply, that I think I have obtained *general* information relative to the business of farming sufficient to compensate me *amply*.

At page 217, vol. III, I found a description of a cheap and useful root cellar, from which I have received hints worth more than the price of two years subscription. I of course varied the plan to suit circumstances. Mine was under a hay barn, 16 ft. by 26. Under one half the building the sheep have a shelter, and under the other half, 16 by 13, the cellar is located. Of course it is not quite as large as that of our Vernon friend, but otherwise it is similar to his. The passage is through the sheep shelter. It may be well to remark that the barn stands on descending ground, and the sheep occupy the lower end, and the cellar is at the upper end.

Carrots are the roots I keep in the cellar, and I will just mention my mode of cutting them:—I made a box by taking a piece of plank, say one foot wide, and two and a half feet long, nailing pieces of boards one foot wide to the sides and ends. A strip of leather nailed at each end, to the sides of the box, forms a handle. This box is filled with carrots, and by the aid of a common spade, ground sharp, they are soon "chopped up," when they are placed in the sheep-troughs and soon devoured. For feeding hay I use racks, made by nailing boards to upright pieces of scantling, similar to those described by L. A. Morrell.

When I commenced reading the Cultivator, I found the raising of carrots and corn fodder recommended. Not being much acquainted with the business, I tried a little piece of each in the garden by way of experiment. A neighbor when he saw me weeding the carrots, (little things scarce large enough to be seen,) told me it looked like "little business," and that for his part he had rather hoe potatoes than trouble himself with such small affairs. However, when autumn came and he compared his diseased potatoes with my sound and rich looking carrots, he seemed to change his opinions. He told me last spring, that he had a piece of ground, about fifty square rods, in a tolerable state of fertility, and better adapted than mine for growing carrots on account of being free from stones; and that if I would furnish seed for the whole, I might have the use of half of it. I accepted the offer, and the seed was procured and planted. A simple barrow or wheel was used for marking the ground.. The seed was then scattered along in the furrows by hand, at the rate of perhaps two and a half pounds per acre. Distance of drills apart twelve to fifteen inches. The seed was covered by reversing a hoe, and shoving it over the drills. The ground was around the barn, and it did not fail of producing plenty of weeds; but by beginning in time, and persevering, they were kept down till the carrots got above them and choked them down. In our mode of planting, I think two active men might plant half an acre in a day. At harvest a scythe was first passed over them, cutting the tops as close to the ground as could conveniently be done. With a hoe ground sharp, the tops were then cut off, one row at a time, and the tops were raked off out of the way. The carrots were then thrown out, row by row, with a spade. Whether our mode was the *best*, or even a good one, I am not prepared to say, not being practically acquainted with any other. The yield, though not great, was satisfactory. The quantity obtained was about 270 bushels, measured as potatoes; I presume they would not hold out by weight. The amount of time spent in plowing and harrowing the ground, and in sowing, weeding, and harvesting, may be set down at twenty-five days. Allowing seventy-five cents per day for labor, and calling the cost of seed and use of land $3.25, the amount is $22, which brings the carrots at a little more than eight cents per bushel, and I deem them worth at least as much as potatoes for horses, cattle, or sheep.

A word as to corn fodder. My garden experiment did very well, and I concluded to "try again." I planted in drills this year, about three quarters of an acre. The growth was tolerable. I endeavored to adhere to the directions given in the Cultivator for curing it, but the weather in autumn was so extremely wet, that I could not get it as dry as I wished. I got it in as good condition as I knew how to, and put it in the barn, but it moulded so much as to lose most of its worth. I would like to hear whether others have met with similar difficulty, or whether my failure was owing to bad management.

In asking my brother farmers to subscribe for the Cultivator, I discover something of an idea prevailing that it concerns chiefly the patricians, and that plebeians can derive little benefit from it. But as to the idea that the contents of the Cultivator are useful only to large farmers, I deem it widely erroneous. In its pages every man engaged in agriculture, whether he cultivates ten or ten thousand acres, may, in my view, find information worth much more than one dollar per annum. SAM'L WILBUR. *North Easton*, *N.Y.*, 1848.

Large Crop of Indian Corn.

I send you a statement of my success in cultivating corn the past season. As I am indebted to the Cultivator for success, I thought I might be the means of benefitting others through the same channel.

STATEMENT OF CULTURE—The field on which I grew 172 bushels of corn to the acre, and two 2-horse loads of pumpkins, was on a clover and timothy sod of three years standing, and on white-oak upland—part of a farm that was considered run down. In the fall and winter of 1846, I fattened on it about 30 head of hogs, by scattering the corn on the worst parts of the same. About the month of March last, I gave it a moderate dressing of barn yard manure. The field was plowed six or eight inches deep, so that in parts hard yellow clay was turned up full 2 inches deep. The corn was planted in rows four feet apart, averaging about one foot distant in the row. When first the corn came up, it had an unfavorable appearance, in consequence of the large spaces of hard clay; it looked very yellow in patches, but by degrees, these patches disappeared, and as soon as the roots had penetrated below the clay, and reached the sod, it showed quite a healthy color, and made a rapid growth. I was careful during the whole of the cultivation, to disturb as little as possible, the sod, in consequence of some remarks I had read in the "Albany Cultivator," from the pen of the late lamented Judge Buel, to which publication I am indebted in a great measure for my success. A. A. Mullett.

EXPENSE OF CULTIVATING TEN ACRES.

Manure and hauling,	$20 00
April 11, 7 days plowing at $1.50 per day,	10 50
" 2 days harrowing at $1.50 per, day,	3.00
" 30th to May 4, Striking out,	1.25
Man 5 days planting at 50c.,	2 50
Boys dropping,	1.25
Three bushels corn at 40c.,	1.20
May 15, Replanting, &c.,	1.00
Plowing some 4 times, 3 days each $1,	12 00
Boys harvesting same,	9 00
Cost of cultivating ten acres,	$61.70

or $6.17 per acre, exclusive of rent.

P. S. I cut the whole of the corn, and the fodder has been sufficient to save from 8 to 10 acres of hay, my usual consumption.

Muck Compost.

Will you have the kindness to give us your views as to the comparative value of compost, composed of equal parts of rich swamp muck and yard manure, with decomposed yard manure, when applied as a top-dressing to light upland soil; and also the value of the same compost compared with green manure for the same purpose?

What do you think would be the value of a compost made with equal parts of rich mould, the washings of higher lands, and yard manure, compared with decomposed and green manure as in the foregoing, when applied as a top-dressing to a black, lowland soil?

What would be the comparative value of a compost composed of equal parts of good sandy loam and yard manure, when applied as a top-dressing to a clay soil?

Should not the earthy part of a compost be of a character opposite to the soil on which it is to be applied?

Do you consider that compost, when applied to the land, is more valuable than would be the parts that compose it when applied separately; and if so, what are the changes that render it more valuable?

What would be your opinion as to the comparative value of the different kinds of compost, when applied to tillage lands of the above description?

Woodstock, Vt., 1848. A Subscriber.

We cannot give a precise answer to the above questions. "Swamp muck" varies greatly in quality, and that which some people would call "rich," might not be of the very best quality. Animal manures also vary in value. Stall-fed animals, or those which eat the richest food, produce the strongest manure; and one load of this manure, abounding in ammonia, would probably go as far in decomposing peat and rendering it soluble, as two loads of manure from stock fed only on straw or poor fodder of any kind. Various persons have used muck compost; but perhaps the most accurate experiments with muck compounded with animal manure, were made by Lord Meadowbank, forty years ago. According to his trials, a compost made of one part stable manure with two parts of peat, fermented, and thoroughly incorporated together, produced effects on several different kinds of crops, and on various soils, equal to the same quantity of unmixed manure,—whether the latter was applied in a fresh or decomposed state. But we presume the peat in the case referred to was of the best character.

In *general* we should think "rich mould" which had been washed from "higher lands," would be more valuable than "swamp muck."

We *do* think "that [peat or muck] compost, when applied to land is more valuable than would be the parts of that compost when applied separately." The vegetable food contained in peat, in its natural state, is locked up by noxious acids, which are neutralized by the alkalies of animal manures. Thus Dr. Dana observes: "the solubility of geine is wonderfully increased by the action of alkalies."

But we would suggest to our correspondent the advantage of testing these questions by *accurate experiments* of his own; and when these have been made we should be pleased to learn the results.—Eds.

New Mode of Setting Posts.

The first, and one of the most important subjects to be considered in the commencement of farming, is that of fences, and as there is no other business that requires more wisdom and economy to ensure success, it is necessary first to determine on good fences in all cases, and then to consider how they may be made good at the least possible expense. As the post and board fence is adapted to more situations and circumstances probably than any other, and as the manner of constructing it is somewhat varied and expensive under any and all circumstances, it may be well to suggest here a new and cheap mode of setting posts, which is the most expensive part in the labor of constructing a good and cheap board fence.

A small pile driver may be constructed so as to fit the bolsters of a common wagon, with the hammer to work immediately behind the hind axle tree; the hammer should weigh about two hundred pounds, to be able to drive large posts with facility, without being too heavy for one horse to draw up without a purchase; the frame work may be so constructed as not to be unwieldy, or much more inconvenient to shift on or off of a wagon than a common hay or wood rack. When in use, the wagon containing the machine must be placed on a line with the fence, with the hammer directly over where the post is to stand, the wheels firmly blocked, and the horses detached. The post, having been sharpened, is raised to its place by the hammer rope, in the same manner as heavy piles are raised, when a few drops of the hammer set it firmer than could be done by digging a hole for the purpose, and with less than half the expense of labor. The horse is then attached to the wagon which is drawn to where the next post is to stand, and the same process repeated. This method may be adopted on all level land with the best success; it is a perfectly simple operation, and so cheap that it only requires an introduction to get it into use in a very short time.

Pile-driving, heretofore, has been very correctly considered a heavy and expensive business; but when we consider the difference between the expense of building and working a machine to drive large piles, thirty or forty feet deep, and another to drive small ones, two or three feet, it will be readily seen that fence posts may be driven, in the manner described above, much cheaper and better than they can be set in any other way. When the posts are set, the boards should be nailed on the middle post with one nail in each, and allowed to lap at the ends from four to six inches. A narrow board should be put up and down the posts to cover the ends of the boards, and pins made of cedar or some durable timber, put through into the posts, passing under the boards to prevent any bad effects from the expansion and contraction of the boards in wet and dry weather, which, though very small in one length, amounts to enough to do much mischief, in loosening posts and breaking nails, in a long stretch of strait fence. The posts should be sawed off at the top, with an inclination downwards from the face, and a short sound piece of board nailed on to carry off the rain. This is the cheapest *good* board fence that can be made, and should you consider it of consequence, I will give you a plan and estimate of the expense of a machine, and the building of such a fence. Dean. *Lyonsdale.*

The largest Corn-Grower in America.

A writer in the Morgan County (O.) Chronicle, states that he travelled, last season, in company with William Polk, Esq.. a brother of our President. He was informed by Mr. P. that his crop of corn for 1846, grown on his plantation in Arkansas, was estimated at 100,000 bushels, and that he supposed he was the largest grower of this article in the United States. The writer presumes that he is the largest grower of this grain in the world. His cotton crop was said to have been a failure—he having picked "only between four and five hundred bales." He kept 200 hogs on his plantation. He was selling corn in New Orleans from 60 to 110 cents per bushel. The follow is an estimate of his products:

His corn was then worth at least			$70,000
His Cotton	do	do	16,000
His Pork	do	do	4,000
Making the aggregate of			$90,000

for three articles *only* of his products. His whole produce is supposed to be worth at least $100,000 per year. It is stated that Mr. Polk began poor, and had made all he possessed by his own exertions; and in conclusion it is added:—"Here, then, are two planter's sons beginning the world poor; one is the greatest corn grower in the world—the other holds the first office in the world."

"Gutta Percha."

This is a substance which has been brought into notice within a few years. It is the product of a tree which grows in the East Indies. Prof. Webster, of Cambridge, Mass., has given in the Boston Courier a more particular account of the article and its uses than we have before seen. He has made several experiments with this curious substance, and has prepared from it a variety of articles. At and below a temperature of fifty degrees, it remains as hard as wood. At a temperature a little below boiling heat, it becomes soft, and is then easily cut and moulded into all varieties of form. When it again becomes cold, it resumes its former hardness. It is very tough, and in its ordinary state resembles horn. Prof. W. took a ring made from a slip half an inch wide and one-tenth of an inch in thickness, and found it would support a weight of one hundred and fifty pounds without breaking. It is found to resist the action of water, acids and many chemical agents. It has been used for tubes for the conveyance of gases, for cementing substances; and Prof. W. has had a pair of shoes made from leather prepared in a solution of the substance, and put together without sewing, pegs, or nails; and they are pronounced by the maker stronger than he could make them by the usual method.

In the experiments which have been made for testing the action of water upon the "Gutta Percha," the water has received no impregnation, has acquired neither taste nor smell, nor has the material been in any way changed, and the tubes have not been ruptured by the freezing of the water in them. All circumstances have induced Prof. W. to believe that it would be preferable to any other article for the purpose of making pipes for the conveyance of water. As yet but a small supply only of the material has been obtained; but it can be had in abundance in the country where it is produced. It is procured by felling the trees from which it is obtained—stripping off the bark, when the substance exudes in the form of a milky juice, which is collected and poured into troughs, where by exposure to the air it hardens. Prof. W. has adopted a mode of dissolving the substance without the aid of heat, which he thinks of advantage. The particulars of his process are not given.

Carrots as Food for Stock.

At one of the agricultural meetings held in Boston during the past winter, the subject of cultivating "root crops" for stock, was discussed. The general expression was, that the carrot is the best root for this purpose, in situations adapted to its growth. Hon. Mr. Brooks stated that he had made experiments in feeding carrots, and for young stock he thought them as valuable in weight as good hay. He thought they did not produce as much milk, when fed to cows; as potatoes, and hogs preferred potatoes. He considered carrots compared with oats, to be worth 33 cents per bushel when oats were worth 50 cents—that 10¼ lbs. of carrots were equivalent to 3 1-2 lbs. of oats. He considered the tops of carrots of sufficient value to pay the expense of harvesting. He put them up in small stacks out of doors, and they kept good till mid-winter.

Mr. Rice said he sowed carrots early in May on light land—usual crop 500 bushels per acre—40 bushels weigh about a ton, and were worth as much as half a ton of hay.

Mr. Proctor said 35 tons of carrots had been grown on an acre at a single crop, and it was not uncommon to obtain 32 tons. Most of the speakers mentioned that the blight had injured their carrots, more or less, of late years.

Plowing Well.

No farmer, we think, who has ever remarked the inefficiency of the "cut and cover" mode of plowing,—that is, trying to throw over a slice of earth twice as wide as the plow will perform,—will prefer it to the infinitely superior mode of drawing deep, straight, and narrow furrows. "It is not to please the eye only," says a late practical writer, "that the plowmen of Westmoreland, Cumberland, and other well cultivated counties in England, take so much pains in drawing their deep furrows, as straight as a line can make them, and laying them so compact, that not a crevice between them can be found in fields of many acres, but to favor a perfectly even and uniform covering of the seed sown upon the ground." We would recommend to the farmer who reads this, to plow the next acre with perfectly straight furrows only six inches wide; and if, after viewing its superiority, he then goes back to foot-wide slices, we shall be very much mistaken.

Moon Farming.

A correspondent of the Prairie Farmer, furnishes an article of considerable length, in quite a scientific dress, to show the influence of the moon on vegetation, and as a consequence, the importance of sowing seeds at the right time of the moon. Believing industry, energy and good cultivation to be the main causes of success, and not losing the best days of the season in waiting for the right time of the moon, we shall attempt to show the false reasoning of this writer.

He commences by speaking of the effects of light on vegetation—function of the leaves—importance of light—decomposition of carbonic acid—oxygen and carbon—assimilation of carbon—reflection of green rays—mysteries of nature—respiration—agricultural science, &c., and concludes that as light is important to the growth of plants, it is very proper that they should commence vegetation at a time when they can receive all the light possible; that is, in addition to sunlight during the day, they should have the benefit of moonlight during the night. Now it has been demonstrated that the light received from the sun, exceeds that received from the moon, as more than a *hundred thousand* to *one*. If, therefore, a farmer can find out just how much his young crop will grow in one day of sunlight, he will know about how much it will grow in a hundred thousand days of moonlight, or about three hundred years, supposing his crop to gow by moonlight every night the year round. And if a hundred days of sunlight are required to perfect his crop, then it would require only about thirty thousand years of moonlight before his crop would be fit for harvesting. Whether this would overbalance the loss of a week or two of fine weather in spring while waiting for the right time of the moon, we must leave the candid and intelligent farmer to decide. A friend at our elbow suggests that Adam's crop of cabbages could not have advanced very far towards maturity up to this present time.

Implement for marking Rows—Guano.

I am inclined to offer a notice of a simple contrivance of my own, which I have had in practice for three years, and have found my crops much improved by it. As a planting implement, I consider it an improvement on the old method of furrowing the rows with a plow, which is apt to place the seed too deep in the soil. Instead of a plow, I use a small wedge-shaped harrow, only fourteen inches wide behind, with seven long heavy teeth, but long in proportion. This pioneer harrow cuts deep, and puts the plowed ground in fine tilth to receive the seed, and makes mellow covering for the hoe.

For the last three years I have used the Peruvian Guano, composted with sandy loam, as a top dressing for grass lands—500 lbs. guano to the acre—and have obtained very good results. For corn and potatoes and all planted crops, I run the rows with the pioneer harrow; spread the guano along the rows—then run the harrow again, to incorporate the guano finely with the soil. The germination is accelerated, and the plant has every inducement to a vigorous growth. The after culture is followed closely with the cultivator and the hoe: the results highly encouraging. I obtained last year 62 bushels yellow corn, *shelled*, per acre, from old moss-grown pasture lands, with 500 lbs. Peruvian Guano alone, per acre—the year before 70 bushels corn per acre from the same kind of land; but a moderate dressing of course manure was plowed in in the fall, and then 500 lbs. guano composted, and applied as above at planting time. Jona. Bowers. *Seekonk, Mass., March* 1, 1848.

Account Current with a Cow.

I am no farmer, but I feel much interest in the cause of agriculture. I have often remarked the very inferior stock, particularly cows, of which most farmers in this State keep from eight to ten. I have often asked why they did not keep better cows, and the reply generally has been, "cows are high, and afford no profit." I have always thought differently, and last summer made up my mind to purchase a cow. A friend in the town of Warwick recommended one, ten or twelve years old, called a "native," and I bought her. I have kept a regular and correct account of debt and credit with her, a copy of which I herewith enclose you. I know of no stronger argument that can be used against the idea of the unprofitableness of cows, which I have so often heard advanced in this vicinity, than these statements of *facts*—no *guess-work* about them.

The cow had rather poor pasture. I hired a lot of about two acres, that was sown the year before to millet, *without any grass seed*. But my cow did not arrive as soon as I expected, and the grass and weeds got up considerably. I sold what could be mowed off for $12. The man who bought it thought there was about a ton and a half when he got it into the barn. Most of the cows in our city run upon the commons, and I am sure the feed there was as good if not better than mine had. I should have let her run out; but she showed a disposition to go back where I bought her, about ten miles from the city. You see I have bred two calves. The cow had twins—males—which I sold when they were a week old for $5.

Cow, (Old Warwick)	Dr.
1847.	
July 29, Cash for self,..	$38.00
" 1 bushel meal,.	1.00
" Paid for pasture,	10 00
Aug. 20 Oil Cake,.....	4.69
21, Hay,.........	10.73
24, 4 bush. shorts,	92
" 1 " meal,	88
Oct. 5, 100 lbs. oil cake,	1.65
Nov. 15, 1 bushel meal,	90
Dec. 6, Meal and Feed,	9 59
17, 100 lbs. oil cake,	1.70
23, Brl. meal, Corn and Cob,.......	1.15
31, Bal. to new ac't	63.74
	$144.95

Cow, (Old Warwick,)	Cr.
1847.	
July 16, By cash for grass off lot,...........	$12.00
31, 2 calves, (twins)..	5.00
Dec. 31, Milk sold at store of C. & G., from Aug. 2 to date,..	62.17
Cash for milk sold sundry persons within above time	8.86
Used in my family 2 quarts per day from Aug. 2 to Oct. 1, 118 qts. at 4c.,............	4.72
Do. from Oct. 1 to date, 184 qts. at 5c.	9.20
Hay, meal, &c. on hand,..........	5.00
Present value of cow,...........	38.00
	$144.95
Jan. 1, By Balance, $63.74.	

Should you wish to have a copy of the account at the end of this year, I will send it. I am pretty confident, however, that the credit for the cow will be increased from the above balance. Henry R. Congdon.

Providence, R. I., Jan., 1848.

We shall be glad to receive Mr. Congdon's account with the cow for the present year.—Eds.

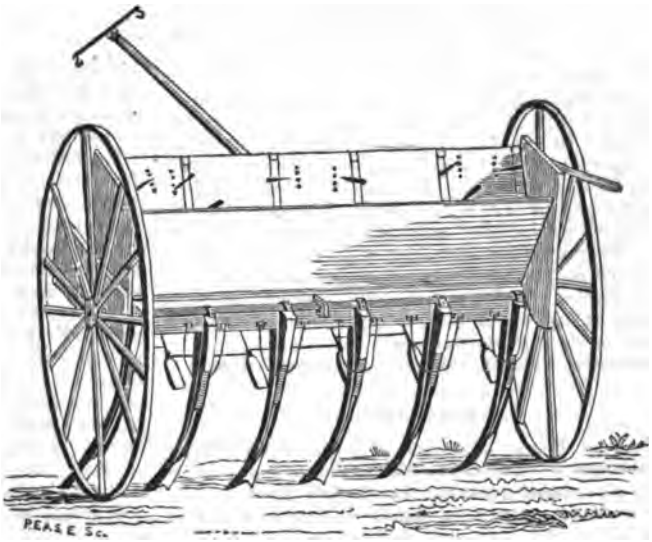
Experiment in the Culture of Corn.

I will venture to give a brief statement of an accidental experiment in the culture of corn. In 1846, I procured some seed-corn of a large twelve-rowed variety, intending to plant it in the same field with an eight-rowed variety, but to keep them separate and thereby to test the relative value of the two varieties; but by accident, after being shelled, the corn got mixed, and was planted in that way. When harvested many of the stalks (one-half I should think) produced two good ears of the usual length. One fact particularly attracted my notice, and which showed the mixture of the two varieties on the same stalk. Many of the stalks which produced two ears had one of eight and one of twelve rows; others two of ten rows; others still, two of eight rows. Thinking that by carefully saving seed from such stalks as had two ears might tend to establish a variety possessing that valuable characteristic, I did so that year, and planted the next year, 1847, entirely from such seed; but my crop that year greatly disappointed my expectations in that respect. Still I think it worth a thorough trial. I would suggest to your readers that several of them make the same experiment this year by mixing two varieties, say eight and twelve-rowed, and plant them together in that way, and communicate the result through the Cultivator after next harvest. An Old Subscriber. *Caanan, Ct., March*, 1848.

Smith's Patent Lever Drill.

The annexed is a cut of a seed drill for wheat and other grains, invented by H. W. Smith, of Pennsylvania. Arrangements have been made for manufacturing the machine at Syracuse, by C. Masten, of Penn Yan, N. Y., who owns the patent for this state. It is described as follows:

"The axles are of cast iron, extending half the width of the machine, with a flange some six inches in diameter on the end, which, with a cast iron plate of the same dimensions screwed on the wheels, retains the spokes and forms the hub. These wheels and axles may be adapted to carriages, wagons, &c. On the axles are cast also the cylinders, three on each, in which indentations or holes are drilled to carry the grain through valves out of the hopper, a box extending the width of the machine into tubes, through which it is deposited in the furrow. It has a lever by which all the teeth can be lifted out of the ground for the purpose of turning in the field, or passing over a rock, or packing to remove to and from the field by a single operation, and two others to close the valves and shut off the feed at the same time. It has a graduated index, by which it can be set to pass any given quantity of seed per acre, or altered from one quantity to another in a few seconds. The teeth are long to prevent cloging, and can be easily cleared by the operator in case they should gather grass, &c. They are bent something like cultivator teeth, and are made to cut a furrow three inches wide at the bottom, where the seed is deposited at any required depth through the tubes which are fastened to the back of the teeth, six in number, and the furrows are cut nine inches from centre to centre; the depth can be adjusted by a regulator, in which the end of the pole is inserted. After the seed is deposited, the earth falls back and covers it. With this machine, a boy and pair of horses, ten acres per day are readily planted, and five pecks of seed are equivalent to two bushels per acre sowed broadcast; with the drill machine the seed is distributed evenly, and is buried at a uniform depth, and every sound seed vegetates.



Smith's Patent Lever Drill—Fig. 44.

Management of Manures.

As economy in the accumulation and application of manures is a subject of almost paramount importance to the farmer, permit me to offer a few thoughts, as it is by an interchange of views that the farming interest is most likely to be promoted. In the first place, the dimensions of the barnyard should be adapted to the amount of stock to be wintered. The barn being sufficiently capacious, I would advise that all the products of the farm be housed. The farmer can then consult his interest, either to thresh his grain in the fall or winter; but supposing a part at least to be threshed in the fall, the overplus of straw, after littering the yard to the depth of a few feet, should be nicely stacked. This littering lays the foundation for the absorption of all liquids consequent upon the yarding of stock. As the winter advances recourse should be had, as occasion requires, to the straw stack, that a clean bedding may be provided for the stock; and then if suitable sheds are connected with the barn, sufficient protection is afforded during the inclemency of winter. The advantage arising from this mode is, all is saved, and this mixing up of straw with the manure of animals, makes an excellent compost for hoed crops the ensuing spring.

Now to its application. I very much doubt the propriety, on the score of economy, of some who heap up the manure in the yard to rot, or of others who draw and stack it in the fields for the same purpose, and are subjected to the additional expense of shoveling and carting it twice; it also having been ascertained that a good share of its fertilizing properties escapes during fermentation. My plan is to let it remain until just previous to plowing my ground for corn, which, by the by, I do not do until about the time for planting, and then haul, and spread and plow it under—plant my corn, and by time the corn is up the manure passes through the stage of fermentation, which greatly accelerates its growth. By adopting this method in the first place, you not only save all, but in the second place you have the full benefit of its fertilizing and enriching properties. And then by planting the early varieties, if in a wheat growing district, the corn can be taken off when the ground is in a fine condition to be sown to wheat. If otherwise, it will be in the best possible condition for any spring crop. W. ANSLEY.

Potter, Yates Co., March, 1848.

Book-Farming—Potato Disease—Large Pigs.

People may say as much against *Book-farming* as they please, yet I think it is a fact, (and I am not the only one that thinks so,) that the town of Cheshire is worth thousands of dollars more than it would have been if there had never been an agricultural paper taken and read by the inhabitants. Since the Agricultural Society of New Haven County was re-organized, some ten or twelve years since, Cheshire has taken more than double the premiums on farms of any other town in the county; it has taken the first premium on five different farms, the second and third on two or three others. And as for stock, dairy products, grain, vegetables, fruit, &c., there is not a town in the county that can go ahead of Cheshire. And why is it? I will tell you. All the principal farmers in the town read the Cultivator or some other agricultural paper. Why, there is one piece in the February number, I think worth more to each reader of the Cultivator in all New England than the volume costs—I mean the article entitled "unenclosed lands," by William Bacon. I wish the Legislature of Connecticut, at the next session, would pass a similar law to the one mentioned by Mr. Bacon. I have suffered serious inconvenience and loss by cattle straying at large over the highways, breaking into my fields and door yards.

Last season I planted four different kinds of potatoes, all in one field, applying to each hill a handful of a compost of ashes, lime and plaster, in equal quantities. The tops kept green till late in the fall, and the potatoes were large and fine when dug. The land was tilled, the potatoes were planted, hoed, dug, and housed in every way similarly to F. Holbrook's method as described in the January number of the Cultivator. My cellar is deep and dry, and so warm that there has been no frost in it this winter. The potatoes are still dry, yet they nearly all turn black. They have no stench more than any other potato; but nearly one half are a dried, black, worthless mass for man or beast.

I frequently see notices in the papers of the weight of hogs. On the 8th of January, 1844, I butchered two spring pigs, a sow and a barrow. They were just three hundred days old. The sow weighed 440 lbs., and the barrow 370 lbs., dressed. I bought them at five or six weeks old of my neighbor to try experiments on. They were fed with skim milk or whey, ground corn and rye, with a dessert of apples, after the latter were grown. And I can say that they neither went hungry or dry, wet or cold, except when I poured cold water on them in hot weather.

Cheshire, Feb. 21, 1848. CLAUDIUS ALLEN.

Rat-Proof Granary.

In your February number, it is mentioned that a gentleman at Baltimore, Md., wishes for a plan to build a rat-proof granary. In the first place, to hold the required quantity, it should be twenty feet wide and thirty feet long, with fourteen feet posts. The roof and ends should project over eighteen inches, as there should be a window at each end. The projection will prevent the rats from running up and gaining admittance at the windows. The sides should be covered with slats or planks, four inches wide, one and a half inches thick, leaving a space between three-eighths of an inch to allow circulation of air. The covering below the projection should be of southern hard or pitch pine. It may be selected full of pitch at almost any lumber yard, and the floor should be laid with the same kind of stuff, and by having the door boards and threshhold as full of pitch as possible, and the latch on the bottom as well as the centre of the door to keep it from warping, you are sure no rats can trouble you, as they cannot get through pine full of pitch, any sooner than cast-iron. It fills their teeth in the same manner it would a rasp. I have a granary covered with southern hard pine, and they have not attempted to get through the planks, although it has been covered nine years. THOMAS ANDREWS. *Smithfield, R. I., Feb.* 24, 1848.

MR. JACOB TEN BROECK, of Greenport, N. Y., writes in relation to the above subject as follows: "I built a corn-house fourteen feet square, and raised it on short posts on the corners and centre, about two feet above ground; and tried for experiment old tin pans laid on the top of these short posts, upside down, and I have not found a rat to trouble me as yet, which is now about three years. My barn was completely overrun with rats, and I gave them one dose of Punderson & Harris' 'Rat Exterminator,' bought of druggists in Hudson, and they have left me."

Best Fowls.

I have quite a flock of fowls of different varieties, and am inclined to think the common dunghill as good as any breed for *layers;* but for the table I prefer larger varieties. My fowls have given me eggs almost every day this month, (December.) They require for food, meat as well as grain. They should also have access to lime, brick-dust and gravel. J. C. SWAN. *Calais, Maine.*

DRAINING.—To ascertain whether a subsoil can be benefitted by under-draining, remove the surface soil for a small extent, then dig a hole into the subsoil; if in this hole water soon collects, then the subsoil will be benefitted by draining.

Domestic Economy, Recipes, &c.

Wash for Buildings.

In one of the numbers of the Cultivator for 1847, a subscriber asks—"Will coal-tar, put on a roof, prevent the sparks from a locomotive from catching?" [Vol. 4, page 227.]

The following receipe was sent us by a gentleman of New Orleans, who writes that the wash was satisfactorily tested upon the roof of the Phœnix Foundry in that neighborhood. It is not only a protection against fire, but renders brick-work impervious to water. The basis is lime, which must first be slacked with hot water in a tub to keep in the steam. It should then be passed, while in a semi-fluid state, through a fine sieve. Take six quarts of the fine lime, and one quart of clean rock salt for each gallon of water—the salt to be dissolved by boiling, and the impurities to be skimmed off. To five gallons of this mixture, (salt and lime,) add one pound of alum, half a pound of copperas, three-fourths of a pound of potash, (the last to be added gradually,) four quarts of fine sand or hard wood ashes. Add coloring matter to suit the fancy.

It should be applied with a brush. It looks as well as paint, and is as lasting as slate. It stops small leaks, prevents moss from growing, and renders the work incombustible. B. *Philadelphia, Pa., Feb.* 1.

CHEAP PLASTER FOR COARSE FINISH.—Take one part clay, three parts of river sand, mix with a portion of the sand when wet, sufficient quantity of hair—thoroughly mix the whole mass until of a proper consistency, and use as lime mortar.

The above makes a good hard wall nearly or quite as serviceable as lime for inside finish. The above has been tried in this vicinity and endured for years.

Braceville, Trumbull Co., O. F. E. STOW.

KEEPING DRIED FRUITS.—In answer to the inquiry in a late number of the Cultivator, a correspondent at Fredonia, N. Y., writes—"Give the fruit a thorough steaming, after it is dried, so as to kill the nits of insects; then put them in some secure place where the flies cannot get to them."

PRESERVING EGGS.—Pack the eggs to be preserved in an upright earthern vessel, with their small end downwards, and pour over them melted tallow, while it is warm—(not hot.) The eggs should be completely covered, and when the tallow is cold, set the vessel in a cool place till the eggs are wanted. A writer in the *Ag. Gazette* states he has kept them nearly a year, and were found excellent.

RASPBERRY VINEGAR OR SYRUP.—Put one quart of best white-wine vinegar, to two quarts of raspberries, not over ripe. Let them steep in the vinegar twenty-four hours; then strain them through a sieve, without pressing the fruit, and pour the liquor so strained on two quarts more of raspberries. In twenty-four hours more, strain it off again, and to a pint of juice put one pound and a half of very fine loaf sugar. Put the above into a jar, and the jar into a pan of warm water, and let it stand till all the sugar is melted, taking off the scum as it rises; then take the jar from the warm water, and when cold, bottle off for use. These directions are given from a correspondent of the Gardener's Chronicle.

WHEEL-GREASE.—Two parts hog's lard by bulk, and one each of black-lead and wheat flour. We have heard wagons a mile off on a still morning, uttering the most dismal sounds, from the want of a little of this material, and which a very little imagination translated into the words—"meeze-e-ry, mecze-e-ry, mee-zo-er-y!"

Answers to Inquiries.

WASTE WOOL FROM FACTORIES.—"A SUBSCRIBER," New Preston, Ct., Wool is similar to horn, in its composition—both containing a large proportion of nitrogen. They are, however, slow in decomposing, and give out their nitrogen in small quantities. Horn-shavings, from the comb-makers, have been found useful when applied to Indian corn at the time of planting, at the rate of a small handful to a hill. The sweepings of woollen factories are considered of great value in England, and also in this country, so far as the substance has been tried. We are unable to say what the usual course of managing it is, but we have seen it made up in compost-heaps with muck, and have been informed that after it had laid a year and was then thoroughly worked over, it was excellent as manure. It is best applied near the surface—a burying with a harrow being sufficient. Mr. PRENTICE, near this city, has used large quantities of hair, (the waste of a fur-factory,) in this way. Wool and hair, are of course, nearly the same in principle.

WHALE-BONE REFUSE.—G. W. B., New London, Ct. We should suppose the best mode of converting this substance into manure, would be to use it in compost, as above directed for wool-waste, &c.

BEE-HIVE.—T. W. Madison, Ind. We have heard Kelsey's bee-hive well spoken of, but have no personal knowledge of it.

MACHINE FOR WORKING BUTTER.—J. H. C., Adrian, Mich. The only implement of this kind of which we have any knowledge, is that spoken of in the Cultivator, vol. I, new series p. 340, and figured in vol. III, p. 187, and still further described by J. W. Lincoln, Esq., vol. III, p. 240.

WOOD FOR FIRKINS.—J. H. C. Oak, ash, maple, birch, and spruce, are all used in various districts, for firkins. There is not an entire agreement as to which kind is preferable. If the best of "second-growth" white oak, free from sap, can be had, it is probably as good, if not better than any. Old brash oak is porous, and not good for keeping butter a long time. The same may be said of open-grained ash, though the best of ash answers well. A butter-dealer of great experience, in this city, informs us that the best maple, either red, or sugar maple, thoroughly seasoned, makes as good firkins as he ever used.

"POND MUD."—E. R., Hartwick, Otsego co., N. Y. The "deposite at the bottom of mill-ponds" is generally similar to what is called "muck," and which is found in various situations. The best manner of using as manure, would be to lay it up exposed to frost one winter, and then make it into compost, as has often been described for muck or peat.

CHERRIES FOR MARKET.—E. J. F.; Painesville, Ohio. Cherries to be sent far to market, must be picked before they are *dead* ripe—the stems left on. They will thus bear to be put in pretty large baskets, if they are not shaken or jammed on the way. They should be kept in as cool a situation as possible, and when they have reached their destination, should be divided into small parcels, to avoid the tendency to fermentation which exists in large masses.

HOUSES OF UNBURNT BRICK.—J. A. L., South Hadley, Mass. So far as we have heard, walls of buildings made of unburnt brick, in the manner described in our March number for last year, (p. 74,) stand well—are not affected by frost, moisture or heat. They have been used more in Canada than elsewhere, and are highly approved. We are not in possession of any important information which we have not already published.

RAPE SEED.—"A SUBSCRIBER."—Ypsilanti, Mich. We do not know of any rape seed for sale. It is not cultivated in this vicinity, and we are not apprized of its having been cultivated to any extent in this country.

BURNT BONES.—W. H., West-Bethel, Vt. In burning bones, the gelatine or animal matter, which is valuable as a manure, is consumed, but the earthy matter, which is chiefly phosphate of lime, remains, and is valuable as a manure for many plants, particularly wheat.

CLAY PIPES.—We are informed that clay pipes for draining are made by W. K. PRICE, of Middletown Point, Monmouth county, New Jersey. The particular kind is not described, and our correspondent also omitted to state the price.

PACKING HAY.—We have received several inquiries in regard to the best mode of packing hay in bales of 300 to 350 pounds, and the best machines used for that purpose. We shall feel obliged if some of our readers who are engaged in this business would furnish us with the information—stating the kind of machine or press preferred, where made, and the price.

Agricultural Societies.

RENSSELAER COUNTY, N. Y.—Next Show and Fair to be held at Troy, 20th and 21st September. This is one of the most spirited county societies in the country. It has offered on this occasion about $1500 in premiums. The Secretary is SETH H. TERRY, Esq., Troy, who will attend to all communications in regard to the society.

WINDSOR COUNTY, VT.—Fair to be held at North Springfield, on the 4th and 5th days of October next.

CALEDONIA COUNTY, VT.—Officers for 1848, JAMES D. BELL, President; WM. GRAY, BOWMAN BEMIS, Vice Presidents; ANDREW MCMILLAN, Treasurer; GEO. B. CHANDLER, Secretary. This Society paid premiums for the following crops grown in 1847: *Spring wheat*—thirty-five bushels on one acre, and thirty-one rods of ground,—first premium. A second premium was awarded for twenty-seven bushels on one acre. Both crops were of the Black Sea variety. One crop was sown the 20th of May and harvested last of August. *Indian Corn*—109 bushels per acre—planted 24th and 25th of May. A second premium for 200 bushels *of ears*, one acre. *Potatoes*—324 bushels "good sound potatoes" on one acre. A second premium for 303 bushels on one acre.

ONTARIO COUNTY, N. Y.—Fair to be held at Canandaigua 10th and 11th October next. The officers for the present year are JOHN GREIG, President; ELIAS COST, JOS. FELLOWS, J. S. HART, W. H. LAMPORT, HIRAM ASHLEY, Vice Presidents; OLIVER PHELPS, Cor. Secretary; W. W. GORHAM, Rec. Secretary; G. W. BEMIS, Treasurer.

SENECA COUNTY, N. Y.—Officers for the present year, JOHN DELAFIELD, President; JOHN D. COE, Treasurer; WILLIAM R. SCHUYLER, Secretary. JOHN KENNEDY, Delegate, to represent the Society at winter meetings of the State Society at Albany. Delegates have been chosen to attend the autumn fairs of the adjoining counties of Ontario, Yates, Tompkins, Cayuga, and Wayne.

RHODE ISLAND STATE SOCIETY.—Officers for 1848—JOHN PITMAN, President; JOHN JENCKS, CHRISTOPHER RHODES, WILKINS UPDIKE, Vice Presidents; CHRISTOPHER S. RHODES, Secretary; HENRY W. LATHROP, Treasurer. The next fair of the Society is to be held at Pawtuxet.

SHINGLE MACHINE.—Those who are interested in the manufacture of shingles, are referred to the advertisement of Mr. PETERS, in this number.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications received, since our last, from G. W. Brown, An old Subscriber, E. J. Ferris, J. H. Cleveland, Adrian Bergen, F. R., M. Quinby, T. D. Burrall, An old Housekeeper, E. Hammond, C. J., J. C. H. (with Reports on Manures and Culture of Indian Corn,) A Subscriber, W. H., S. A. Law, Wm. Bacon, J. S. Pettibone, J. F. Simonds, G. R. Nebinger, J. Hildreth, A. B. Price, Levi Bartlett, J. B. Burnett.

Our thanks are tendered to H. W. Washbon, for a cock and three hens of the Creole breed——To Winter & Co., Nurserymen, Flushing, for copies of their new Descriptive Catalogue.——To Dr. J. H. Willard, for seeds of a very fine Cabbage.——To ———, for Hon. Mr. Marsh's Address before the Rutland county (Vt.) Agricultural Society.——To ———, for Mr. Buckingham's Report (in the Senate of Massachusetts) on the establishment of an Agricultural Institute, accompanied by a bill for that object.——To Major J. B. Dill, for Mr. Johnson's Address to the Cayuga Agricultural Society.——To Rev. C. E. Goodrich, Utica, for papers of the Melon and Melon Squash Seeds, described by him at page 159, of this paper.——To W. H. Graham, publisher, New York, for Universal History, Part II.——To Hon. W. B. Calhoun, Secretary of the Commonwealth, for Transactions of the Agricultural Societies of Massachusetts for the year 1847.——To Hon. Salma Hale, for his Address before the Cheshire (N. H.) Agricultural Society, at its annual meeting in January last.——To ———, for first Report Montreal Horticultural Society.——To J. W. Bailey, for Proceedings of Clinton County N. Y. Ag. Society for 1847.——To Lea & Blanchard, publishers, Philadelphia, for parts 16, 17 and 18 of Domby & Son.——To F. Knight, publisher, for Washington's Agricultural Correspondence.

Singular variety of Squash.—We have received from Mr. Edwin Newby, of New-York, a few seeds of a variety of squash which is new to us. The seeds are about the size of those of the common crooked-necked winter squash, but are of a *dark-brown color*. Mr. N. gives the following description of the squash: "It is rather bell-shaped; weight 20 lbs.; skin very hard, and nearly pure white; flesh, a fair thickness, and almost black, as you may suppose from the color of the seeds. What adds most to its excellence is, it is the driest squash when boiled I have ever met with—it being similar to a mealy potato. From its extreme hardness I have no doubt that it is a good keeper. It was brought, by my express desire, from the Pacific ocean. I hope it will prove valuable in this country."

Schools for Orphans.—We have received a communication from Mr. James Jenkins, of Paintersville, Ohio, in regard to the establishment of schools for orphans. We have only room to state, in brief terms, his plan; which is the organization of one such school in each county, to be under the general supervision of the Agricultural Society of such county; "the scholars to labor a sufficient length of time for their support, and to defray the expenses of tuition, and spend the remainder of their time in study; and if any should enter too young to support themselves, let them be clothed by the agricultural society, or a charitable association, or an appropriation by the legislature. The course of study should be a good English course, with a thorough theoretical and practical knowledge of agriculture and horticulture. The scholars to remain in the school till eighteen or twenty years of age." We have no doubt that schools for the object named, if properly established and properly conducted, would be highly useful, especially for affording a good home, and the means of education for the poor orphan children of our towns and cities. The "Farm School" of Boston has rendered great service to this class of population; and the citizens of Boston and vicinity have now taken steps for the establishment of an institution on a larger scale, to be located in a favorable part of the country.

Pleasures and Benefits of Reading.—Mr. Adrian Bergen, of New-Utrecht, Long Island, observes in regard to the pleasures and advantages of reading—"It appears to me that to teach a man to *make money*, without giving him a knowledge of the proper manner of using it, is coming far short of the object for which our Maker has placed us here. Hence it is not the man who has the most worldly goods, but him that makes the best use of such goods, that most enjoys life. For myself, besides the pecuniary advantage of reading an agricultural paper, I derive a great *pleasure* in it. I find much satisfaction in looking over the back volumes of the Cultivator, (for I have them all,) and am not only interested with the *agricultural* part, but with those pieces which have an excellent *moral* tendency."

Old Clover Seed.—Mr. E. Croasdale writes—"In the last volume of the Cultivator, page 132, it is said, 'clover seed, kept over one summer, would be dear at half price.' My own experience and that of many others in our section, goes to prove the above assertion an error, and which might be attended with great loss. I have frequently known clover seed that had been kept over one summer, preferred before new seed, provided it had been properly kept."

Farmers' Clubs.—We are pleased to learn that a Farmers' Club has been formed in Seneca, Ontario county, N. Y. It was organized on the 15th of February last. We are informed that it has so far operated well, and that its members are steadily increasing. Mr. William M. Comb, of Geneva, is chairman of the corresponding committee.

Hussey's Reaping Machine.—J. Delafield, Esq., in the report of his farm, states that he uses Hussey's reaper for harvesting his grain. He cut 91 acres last year, and the cost is stated at 41 cents per acre, for reaping, binding, and shocking.

Sheep in Virginia.—Flocks of sheep appear to be on the increase in Virginia. We are pleased to see that several gentlemen have made purchases of some of the best sheep at the north, of various breeds, and are paying much attention to the breeding of them. Mr. Saml. F. Christian, near Greenville, Augusta county, has a flock of Merinos, which is said "will compare advantageously with any flock in the United States." Col. J. W. Ware, Clarke county, has a flock of Cotswolds, which are represented as of excellent quality. In a communication to the *Southern Planter*, Col. W. states that he has lately sold some of his Cotswolds to Mr. Christian, who intends hereafter to keep both Cotswolds and Merinos—breeding each separate and pure.

Devon Bull.—By reference to the advertisement of Mr. William L Cowles, in this number, it will be seen that he has a young Devon bull for sale. We had the pleasure of seeing Mr. C's. stock at the Hartford Cattle Show, last fall. He has some excellent Devons. The originals of his herd were obtained chiefly from R. L. Colt, Esq., of New Jersey, though some of them, we believe, were bred by Mr. Patterson, of Baltimore. Mr. Cowles has now purchased the Devon bull *Rover*, formerly owned by L. F. Allen, Esq., of Black Rock. He is a fine animal, and has taken prizes at various shows.

Durham Cattle.—We would refer those wishing to obtain this description of stock to the advertisement of George Vail, Esq., in this number. Mr. V. has left us a memorandum of the weights of two of his calves, as follows: Bull calf of the cow *Hilpa*, dropped August 4, 1847, weighed April 11, 1848, 572 pounds; bull calf of the cow *Lady Barrington*, dropped August 29, 1847, weighed April 11, 1848, 582 pounds. Neither of these animals were in more than fair condition as to flesh.

Culture of Sumac.—A correspondent wishes to know how soon after the seed of this article is sown, a crop can be obtained, and the probable amount it would yield per acre. We should be pleased if some person will furnish the information.

Cattle for the Dairy.—A writer in the English *Agricultural Gazette*, describing the management of a dairy farm, says—"our meadows are poor and cold, and we require a hardy good milker; to procure which we have crossed Alderney cows with a well-bred Hereford bull, and have many excellent productions from these." Most of the cross-bred stock, he says, prove good milkers, and those which are not, pay well for fattening.

Plowing by Steam.—We believe one reason why plowing by steam has not succeeded better, is in consequence of commencing on a wrong basis. The common way of plowing by successive furrows has been adopted, requiring too much locomotion. The engine should be stationary or nearly so, and should work a strip of ground at least 2 rods wide, only moving from the work so fast as it accomplishes a strip of this width. This we believe is the proper principle to begin with; the particular mode of operating must be left to inventors. Its great superiority consists in this, that the force required to move the engine is diminished as much as the proposed width exceeds that of a common furrow.

Maple Sugar.—H. French, of Loudon Centre, N. H., states in the Boston Cultivator that he makes from 12 to 1500 lbs. of maple sugar annually, which sells from 10 to 12½ cents per pound. The labor employed in making this amount of sugar, is that of himself, a hired man and a boy, "with an occasional day's work" in collecting sap when there is a "large run." These men, however, it is said, take care of a large stock of cattle, and cut up a year's stock of wood during the "time of sapping." He taps the trees by boring into them to the depth of three or four inches with a three-quarters auger. Instead of using wooden spouts driven into the holes as commonly used, he takes pieces of sheet-iron, four to six inches long and two inches wide, bends them the narrowest way in the form of a half circle, sharpens the edges, and drives them into the bark of the tree under the auger hole. These form the spouts, and catch every drop of the sap. The wooden spouts obstructed the flow of sap, and being frequently cracked or split, permitted some of it to waste.

☞S. A. Law, Esq., in his address, states that the county of Delaware contains 31,000 cows, from which there are made, yearly, 1,560 tons of butter—being 800 tons more than the average quantity made by the counties of the State.

Coffee.—The French are noted for making good coffee. The mode of preparing it is to roast the berries (not *burn* them) over a slow fire, so that the aroma or essential oil is concentrated. By greater heat and more rapid scorching, as is too commonly practiced here, the qualities which impart flavor are mostly destroyed. The French only allow their coffee to boil up once, and then leave it to simmer in a close vessel till wanted. If it requires fining, ("*settling*," in common parlance,) a little pounded isinglass is said to be the best. It is best to roast the berries but a short time before using them, and when they are sufficiently cooked, they should be kept till used in air-tight vessels.

Notices of New Publications.

An Universal History of the most remarkable Events of all Nations, from the earliest period to the present time: forming a complete History of the world. W. H. Graham, New York.

We are informed that "the intentions of the author of this work have been, not only to enlarge the mental faculties, and to elevate the ideas of his readers, but to present the world in a new form, a Universal History, without prejudice and without partiality; being instructive for readers in general, and at the same time worthy of the attention of Philosophers, of Statesmen, of Lawgivers, and of warriors." We have received the first two numbers of the work, and from the attention we have been able to give, should think it well calculated to interest the reader. The style is easy and perspicuous, and the typographical execution of the work is neat and plain.

Transactions of the Agricultural Societies of Massachusetts, for the year 1847.

This is a work of 277 pages, comprising a digest of the returns made to the State Department from the various agricultural societies in Massachusetts, and published under the supervision of Hon. W. B. Calhoun, Secretary of State. This is the third volume which has been published on this plan—a plan which we highly approve, as it furnishes in a convenient form the most important results relating to agriculture which are from year to year brought out in various parts of the State.

The Family Kitchen Gardener—Containing plain and accurate descriptions of all the different species and varieties of Culinary Vegetables; with their botanical, English, French and German names, alphabetically arranged, and the best mode of cultivating them in the garden or under glass; with a description of Implements and Medicinal Herbs in general use: also, descriptions and characters of the most select Fruits, their management, propagation and culture: illustrated with twenty-five engravings. By Robert Buish.

The above is a manual of 216 pages, 12mo. The author is a practical gardener, of thirty years experience, and we think his directions for the culture of culinary vegetables, are generally better than those we find in most treatises.

Letters on Agriculture from his Excellency George Washington, President of the United States, to Arthur Young, Esq., F. R. S., and Sir John Sinclair, Bart., M. P.; with Statistical Tables and remarks, by Thomas Jefferson, Richard Peters, and other gentlemen, on the Economy and Management of Farms in the United States: edited by Franklin Knight.

The work before us contains not only the *fac-simile* letters of Gen. Washington to Sir John Sinclair, which have been given to the public in a previous volume, but the entire agricultural correspondence of Gen. W., so far as it could be collected—making a beautiful quarto of 198 pages. It is a work which should be read by every man, and especially by every *farmer*, in the United States. It presents the character of Washington in an aspect new to many of our countrymen, and one which it is delightful to contemplate. It has been too common, we think to view him exclusively or chiefly as a warrior; though it is evident that it was the *agricultural*, rather than the *martial* field, in which he was naturally prompted to move—that "rural sights and sounds" were more congenial to his feelings than those of "blood and carnage." His happiness was more promoted by the use of the plowshare than the sword. The weapons of war were adopted, not from choice, but from the necessities of his country, and at her urgent call; and though in this cause they were wielded with energy and success, they were retained no longer than was necessary for the accomplishment of a just purpose.

But we have not, at the present time, space for a lengthened notice of this work, but shall refer to it more particularly in our next number; in the mean time we would cordially recommend it to public attention.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, April 19, 1848.

FLOUR—Genesee per bbl. $6.56a$6.86—Ohio and Michigan $6.18a$6 25.

GRAIN.—Wheat, Genesee. per bu., $1.35—Ohio, $1 33—Corn, northern. 53a55c.—Rye, 75a76c.—Barley 75a77c.—Oats. 47a48c.

BUTTER—Orange County, per lb., 20a23c.—Western, dairy, 15a18 c

CHEESE—per lb., 6a8c.

BEEF—Mess, per bbl., $8.25a$9.—Prime $5.25a$5 75.

PORK—Mess, per bbl., $10.12½a10.18¾—Prime, $8.75.

HAMS—Smoked, per lb.. 9a10c.

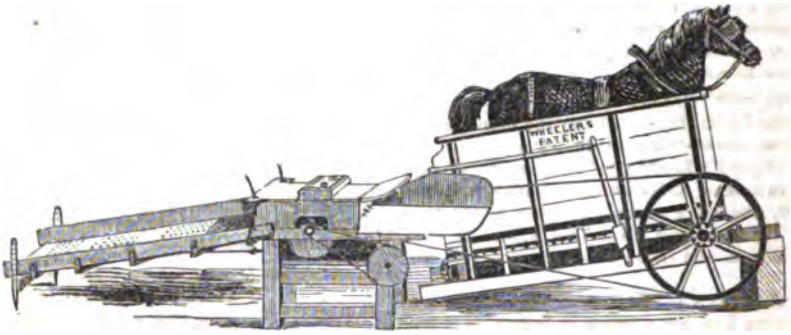
LARD—Ohio, per lb., in kegs, 7½c.

HEMP—Russia clean, per ton, $230.—American dew-rotted, $125a$140.

HOPS—First sort, per lb., 6a7½c.

WOOL—(Boston prices.) April 18.

Prime or Saxon fleeces, washed per lb........	45a60	cts.
American full blood fleeces,....................	40a45	"
" half blood do	35a38	"
" one-fourth blood and common......	28a30	"



WHEELER'S PATENT ENDLESS RAILWAY
Horse Power, and Over-Shot Thresher and Separator.

THE particular attention of Farmers is called to the following extracts from correspondents, showing the utility of, and the high estimation in which they are held by the writers and purchasers. The February numbers of the Cultivator for 1847 and 1848, contain full descriptions of them.

For prices see Catalogue of Ag. Warehouse, gratis at Store or by mail to all applicants.

Albany Ag. Warehouse Nos. 10 & 12 Green-street.
May 1, 1848. HORACE L. EMERY.

RECOMMENDATIONS.

As to the Horse Power and Threshing machine, my opinion remains unchanged. The principle I like. A short time since I had some laborers to work for me who, on seeing my power, remarked that they had heard that I had a baby threshing machine, from which the horses could eat the straw as soon as threshed. I told them they should judge for themselves, as I should use it the same day. In the afternoon I threshed with my two poney horses (fast walkers) one hundred and twenty-one bushels of oats in the space of one hundred and four minutes, which was the best refutation of the story they had heard that I could offer. J. G. STACEY.
Geneva, N. Y., March 3, 1848.

All the articles you sent me I am pleased with. Grant's Fanning Mill cleans as well as I could desire—Steven's Hay Cutter performs admirably.

The Horse Power Threshing Machine and Separator will turn out from the sheaf with four hands, one hundred and fifty bushels of wheat per day. Two horses or mules are quite sufficient for the power, running it the whole day or week without a change—200 large sheaves were threshed with it in 17 minutes, making 8 bushels of wheat. With good attention and a little exertion, 200 bushels of wheat can be threshed and cleaned in the best manner from sun to sun with two horses without a change.
Jonesborough, Union Co., Ill. ELIJAH WILLARD.

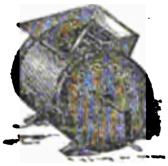
Dear Sir—Wheeler's Threshing Machine and Power, &c., which I purchased from you, has proved so satisfactory in every respect that the farmers around me, and all those who have seen it in operation, pronounce it in all parts the most durable, easy, economical and efficient contrivance ever invented.

I have threshed 2000 bushels of grain of all kinds with it, and it is fully up to all it is recommended to do. Many farmers say they would have no other machine for threshing—and I think you will have many orders for them from my neigborhood, as there is nothing like it manufactured in this country. J. N. ROTTIERS.
Lafargeville, N. Y.

The Horse Power Threshing Machine exceeds my expectations. With an elevation of only 16 inches I placed on my horses, weighing together 18 or 19 hundred pounds, which gave me sufficient speed to thresh: and as it became a little worn and smooth and well oiled, the speed increased to such a rate that I was obliged to feed it with all possible haste to keep the speed down. I have tested its power and efficiency, and find it to be equal if not superior to any I have seen both as to quantity and quality of its work, and easy work for horses. TIMOTHY D. WHITE.
South Hero, Vt., Nov. 19, 1847.

We each have had one one of Wheeler's Horse Power and Threshing Machines in use more than a year, and are gratified to say that they have proved all they are recommended to be—and we believe them in all respects, in simplicity, durability, economy, and efficiency the best machines in use. Having threshed all kinds of grain, and sawed a large quantity of wood for ourselves and about the county, &c, &c, we do not hesitate to recommend them to those wishing to purchase. M. L. CHAFFEE,
Schoharie Court House, N. Y. ABRAM DIETZ.

Dear Sir—I have made thorough trial of the Horse Power and Threshing machine, and do most cordially acknowledge that it works admirably, and gives great satisfaction. I have allowed it to be used by one of my townsmen as a matter of experiment; and he is so well pleased with the operation that he has decided to purchase one the coming season—and I think my having this here may prove to you the means of many sales. H. H. W. SIGOURNEY.
New England Village, Mass., Sept. 24, 1847.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices see Catalogue of Agricultural Warehouse gratis at Store, Nos. 10 & 12 Green-street, Albany, New-York, or by mail.

H. L. EMERY.
May 1, 1848.

VALUABLE BOOKS
For sale at the Office of the Cultivator:

THE HORTICULTURIST, Vol. I, by A. J. Downing—bound in muslin, $3.50—stitched, in French style, to send by mail, $3.00.

THE CULTIVATOR, first series, 10 vols. quarto—stiched, $8.00. Second series, 4 vols. octavo—bound $1.25 per vol.—stitched, $1 per vol.

AMERICAN SHEPHERD, by L.A. Morrell—price $1.25.

THE AMERICAN VETERINARIAN, by S. W. Cole—price 50 cents.

DOMESTIC ANIMALS, by R. L. Allen—price 75 cents.

TRANSACTIONS of the N. Y. State Ag. Society—price $1 per vol.

AMERICAN AGRICULTURE, by R. L. Allen—price $1.

Prof. JOHNSTON'S LECTURES on Agricultural Chemistry—$1.25.

LANDSCAPE GARDENING, by A. J. Downing—price $3.50. Cottage Residences by the same author—$2.

FARM IN MICHIGAN FOR SALE.

I HAVE a good improved farm of 145 acres, three miles from the village of Ann Arbor, for sale. Price $2200 Also 37 acres improved land one-half mile from said village—price $1200. Also 20 acres one and a half miles distant, for $500. Emigrants will do well to give me a call. WM. S. MAYNARD,

May 1, 1848—2t. Ann Arbor, Michigan.

P. SEYMOUR'S BROAD-CAST SOWING MACHINE.

THE undersigned is manufacturing this machine at East Bloomfield, Ontario County, N. Y, where he will promptly attend to all orders for machines, and all applications for the right to manufacture and vend the same.

This machine is the best implement in our country for the purposes for which it is intended. It sows *correctly* (and any desired quantity per acre) all kinds of grain, from peas to grass seed, including wheat, rye, oats, barley, buckwheat, hemp, clover and timothy seed; also plaster, lime, salt, ashes, bone-dust, &c. It is capable of dusting every square inch on a whole acre of land with less than half a bushel of plaster; and 30 or 40 bushels of lime may be thus evenly applied to the same amount of land if desired. It has recently been very much improved, and is now a very durable article, and recommends itself to every intelligent observer.

P. SEYMOUR,

May 1, 1848—2t*. East Bloomfield, Ontario Co.

STEEL CULTIVATORS.

THE subscriber having obtained, by deed from the original Patentee, the exclusive right to make and vend Rogers' Patent Improved Steel Self-Sharpening Cultivator teeth in the counties named below, is now prepared at his residence in Vernon to furnish to the farmers of Oneida, Madison, Oswego, Jefferson, Lewis, Chenango, St. Lawrence, Herkimer, Otsego, Broome, Delaware, Schoharie, Montgomery, Fulton, Hamilton, Saratoga, Schenectady, Albany, Columbia, Dutchess, Greene, Rensselaer, Washington, Warren, Franklin, Clinton and Essex, by wholesale and retail, ready made Cultivators or Teeth.

Agents—H. L. Emery, Albany; Henry Warren, Troy; Isaac Tice, Poughkeepsie; E. Gifford, Hudson; John Benedict, Saratoga; J. P. Clute & Co., Schenectady; R C. Wilson & Co., St. Johnsville; P & E. Reed, Little Falls; Pierson & Giles, Cherry Valley; Sanger & Benedict, Utica; J. L Merriam, Oswego; R. Norris, Sacketts Harbor; Calvin Arbour, Watertown.

Vernon, Oneida co., April 8, 1848—1t. ELIJAH WILSON.

YOUNG DREAD.

THIS celebrated horse will stand the ensuing season at the stable of the subscriber in Mayfield, Fulton county, 3 miles north of Mayfield Corners. DREAD is a beautiful bay, 17 hands high, and finely proportioned. He was at the State Fair at Saratoga, and took the 2d premium there in the first class of horses Weight, when 4 years old, 1400 lbs. *Now five years old.*

Gentlemen sending mares from a distance may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse and all mares sent will be under the charge of the subscriber. Terms $10 if with foal, if not $1. Season, &c. by agreement. All mares put at the risk of the owners of said mares, also escapes.

SIMEON. CHRISTIE,

April 15, 1848—1t. Mayfield, Fulton co., N. Y.

PITT'S DOUBLE PINION HORSE POWER, SEPARATOR, AND CORN AND COB MILL.

I hereby give notice that I am now making a large number of the above machines, which I offer to those who wish to purchase as superior to any machine of the kind now in use.

For the information of those who are unacquainted with my Separator, I will say it threshes and cleans from three to five hundred bushels of wheat per day, and from six hundred to one thousand bushels of oats, and other grain in proportion.

The machine has proved itself superior to all others for the purpose designed.

It has been exhibited in various parts of the United States at State Agricultural Fairs, also in Canada, and has always taken the *First Premium*

My Double Pinion Horse Power has been in operation in Western New-York and Ohio for several years past, and is now admitted wherever it is known, for ease, convenience, strength, durability and cheapness of repair, to surpass any other Horse Power.

The Power is so constructed as to entirely obviate the danger and inconvenience of the large spur wheel, so objectionable in other Powers. It may be used to as good advantage with two horses as any two horse power, and is sufficiently strong and durable for eight horses.

Price of Separator one hundred and fifty dollars.

do Horse Power and Separator complete, two hundred and fifty dollars.

Five per cent. deducted for *cash*.

The Corn and Cob Mill I have enlarged to about double its original capacity, the teeth have been rendered more durable, which, together with other improvements has greatly increased its value. It is furnished with a hopper to feed loose grain, and a tube to feed corn in the ear.

The Mill gives general satisfaction, is durable, easily kept in order, and for the use intended is acknowledged superior to any other mill.

Price Fifty Dollars. JOHN A PITTS,
May 1, 1848. Rochester, Monroe Co., N. Y.

TO MANUFACTURERS OF SHINGLES! ATTENTION!!

THE subscriber in offering his machines to the public, claims them to be superior to any other article of the kind in use. It was patented by Jonathan Bennet in August, 1846, but has been presented to the public only about six months. It obtained the *highest* premium at the Fair of the American Institute, and the universal demand for it since its presentation to the public, claims its rank far above other improvements in this article. It forms two shingle at each descending motion of the gate, and *each from but to tip*, and the operation of jointing is performed by the knives, by turning the blocks previous to cutting. A more full description may be found in the January number of the Cultivator, page 27, and the sale of his article the subscriber will warrant the before mentioned particulars. Orders for single machines will be promptly executed and forwarded by the subscriber at Kent, Conn., via Housatonic Railroad, and for any part of the United States. Terms for machines and right of use from $75 to $100. For county or State rights apply to EBER S. PETERS.

Kent, Conn., May 1—1t*.

FARMS FOR SALE IN THE COUNTY OF MONROE, N. Y.

ONE of the handsomest and best farms in the town of Greece, within a mile and a half of Lake Ontario and the mouth of the Genesee river; and distant only seven miles from the city of Rochester and the Erie canal. The farm consists of 192 acres, well watered by an excellent and never-failing stream, and having about 20 acres of wood—commodious stone house, with pump at the kitchen door—frame barn, sheds, &c., and five acres of grafted fruit—and might be divided into two farms of 150 and 42 acres, equally well watered and supplied with fruit. The land in Greece is not surpassed in fertility by any in the State, nor in convenience to markets.

I will also sell the farm on which I live containing 52 acres; with five acres of choice fruit of every variety; good well, and a small but never failing stream; the buildings are of wood, more extensive and commodious than usual for a small farm: for I had fitted this for my permanent residence. The situation is naturally beautiful, well sheltered by shade and fruit trees, and overlooking Lake Ontario and Genesee river. These lands are fitted for wheat or stock raising, or both combined; and a contemplated Plank Road from the mouth of the river to Rochester, and the increase of business consequent on the steamboats and other vessels stopping here, by which a market for all minor articles, and especially for fruit, will be established, renders these farms very desirable.

Price reasonable, and one-third of the amount may remain on mortgage for some years. A considerable breadth of wheat might be put in this year.

Apply personally or by letter to JOHN MOXON,
May 1, 1848. Charlotte, Monroe County, N. Y.

TWO FARMS FOR SALE,

HANDSOMELY situated one mile north of Northville in the southern part of Cayuga county, each containing seventy-five acres of excellent land, in fine condition, with good farm buildings, orchards, &c These farms are divided by the stage road between Auburn and Ithaca, equi-distant from each. They will be sold separately or together.

Apply to DAVID THOMAS, near Aurora, Cayuga county, or to ISAAC JACOBS, on the premises. 3 mo. 7, 1848.

PROUTY & BARRETT,

Manufacturers and Wholesale and Retail Dealers in Agricultural and Horticultural Implements, Garden, Grass, Field, and Flower Seeds, 194½ Market-St., Philadelphia,

OFFER for sale an extensive assortment of FARM and GARDEN IMPLEMENTS and SEEDS, consisting in part of the following, viz:—

Prouty & Mears' Patent Centre-draught Self-sharpening, Right and Left Hand, Subsoil and Side Hill, Wheel and Swing PLOWS, with Points and Shares so strong and thoroughly purified and hardened, that 100 acres of land have been plowed with a *single set*.

These Plows are constructed of the best materials, and of the highest finish, and for ease of draught and management, the facility with which their points and shares are turned and sharpened, the eradication of weeds and the thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, and the money refunded.

To these Plows were awarded TWENTY-THREE PREMIUMS at Trial Matches, during the past year, proving incontestably their great superiority over their numerous competitors.

Improved Cultivators, with steel teeth; Harrows, Revolving Horse Rakes, Agricultural Furnaces and Cauldrons, Corn Mills, Sugar Mills, Seed Planters, Corn Planters, Cheese Presses, Ox Yokes, Hovey's Spiral Hay, Straw, and Corn-stalk Cutter; Corn Shellers, Grant's Patent Fan Mills, and other approved patterns.

Spain's Improved Barrel Churn—Constructed in such a manner that the whole reel or dashers can be removed (whole) from the inside; the Churn is then clear of all impediments in the way of removing the Butter, and of a perfect cleaning.

Cast Steel Hoes, Shovels, Spades, Hay and Manure Forks, Scythes, Snaths, Briar Scythes and Hooks.

AGRICULTURAL, HORTICULTURAL AND FLOWER SEEDS, in great variety, raised expressly for this establishment by careful and experienced seed growers, and warranted.

☞ Orders solicited. Philadelphia, April 1, 1848—2t.*

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city.

April 1—tf.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

POUDRETTE.

THE LODI MANUFACTURING CO offer for sale their New and Improved POUDRETTE. at the following reduced prices: One barrel, $2; three barrels, $5; and seven barrels and upwards at $1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels ($3 worth) will suffice per acre, and bring a good crop; the labor being less than one half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B Allen & Co, agents, No 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t*.

ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess or suffering injury from is use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N. Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles a small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

P. S Fluid Cataracts removed without an operation.

April 1—4t.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.
March 1—5t*. 107 Fulton-st, New-York.

A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in in front; has sixteen apartments, including kitchens and cellars A frame bank barn, with stone basement, 63 by 35 feet; the corner posts twenty-two feet six inches high With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr Samuel Lawrence of Lowell, Mass, or Messrs Perkins and Brown of Springfield, Mass For terms apply on the premises.

February 7th, 1848—3t.* JOHN SMART.

ALBANY AGRICULTURAL WAREHOUSE.

THE subscriber hereby gives notice, that he has disposed of his interest in this establishment to Mr. HORACE L. EMERY, who will hereafter continue the business in his own name, at the old stand, Nos 10 & 12 Green st., Albany. All demands against the establishment will be paid by him; and all persons indebted to it, are requested to settle their accounts with him without delay.

Mr. Emery has had the entire management of the Albany Agricultural Warehouse since it has been in my hands, and from an acquaintance thus formed with him, and from his long experience in the business, having been engaged in it some ten years, five of which was spent in the establishment of Messrs. Ruggles, Nourse & Mason, at Boston and Worcester, Mass, (the largest in America,) I feel an entire confidence in commending him to the public as one in whose integrity and judgment the patrons of the establishment may safely rely

Albany, Feb. 1, 1848. LUTHER TUCKER.

N. B. The publication of the Cultivator and Horticulturist will be continued at the same stand as heretofore.

THE subscriber tenders his thanks to the public for the liberal encouragement and patronage shown towards the establishment since under his management, and hopes with the increasing interest manifested by the agricultural community for improvement and good tools, and constant and persevering attention on his part to the interests of the establishment and its patrons, to merit a continuance of the same He intends at all times to keep the best of implements, from the best manufacturers of this or other countries: also a full and complete assortment of Grain, Field, Grass, Garden and Flower Seeds; and all business will be transacted as heretofore upon the *One Price System*.

For prices, descriptions, &c., see Catalogue of Agricultural Warehouse, gratis, at Store, or by mail, to post-paid applicants.

HORACE L. EMERY,
Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, N. Y.

NEW WORK ON THE ROSE.

The Rose; its History, Poetry, Culture, and Classification.

By S. B. Parsons. New-York: Wiley & Putnam, pp. 280, royal octavo, with Colored Engravings.

A HANDSOME octavo volume, fully redeeming the promise of its title-page, which the reader will have noted takes in a wide field of practical and classical information. With the practical part of his subject, the culture and classification of the Rose, and with its history to some extent, we expected to find the author somewhat familiar, seeing that he is a well known and successful cultivator. But even in these respects, he has shown an amount of knowledge which we scarcely supposed any individual could have brought to their elucidation; while in the literature of the rose, so to speak, he has brought together such numerous tributes to its beauty, fragrance and emblematical character, as prove no mean acquaintance with the best poets. Indeed, his volume is at once agreeable, instructive, and curious, a very pleasant companion to the mere reader, while to the amateur and the professed cultivator of this most beautiful of Flora's gifts, it will be invaluable—*N. Y. Commercial Advertiser*

Altogether this may be considered the most agreeable and complete work on the rose in the English language. The author has not only collected and arranged all of most interest and value that has hitherto been written on this subject, but he has interwoven through the volume a good deal of interesting information, drawn from his own experience and observation, which has not before been given to the public. The volume is not simply a practical treatise for the rose cultivator, but a pleasant contribution to the library of the scholar, or the book-table of the lady's boudoir.

The volume contains colored plates of two of the new Roses which have elicited most admiration within the last three years—*La Reine* and *Chromatella.—Horticulturist.*

We regret that this beautiful and really valuable volume did not arrive while we had room for a notice worthy of its claims to public favor. All that romance, poetry, and science have endowed the Rose with—all that philosophers have found, and lovers fancied, and ladies felt, about this garner of sweet associations, is here set forth, and worthily; while on two shining pages the beauty herself appears, fairly mirrored in her most magnificent aspect, and seeming only to ask the plucking. We love the book.—*Union Magazine, by Mrs. Kirtland.* April 1—2t.

NORMAN.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15½ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500 The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner. *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and outhouses are new and convenient. A fine large orchard, embracing all kinds of choice fruit trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the west.

March 1—3t. A. H. NICHOLS.

THE EAGLE PLOW.

PROBABLY no Plow has been so long before the public with so few alterations, come into so general use, or received so many, and of so high grade premiums, as the Eagle Plows, from the establishment of Messrs. Ruggles, Noorse and Mason.

Notwithstanding the great diversity of soils, modes of culture, and the increasing competition of many distinguished manufacturers, and year after year having been subjected to the most systematic, persevering and thorough trials ever had in this country, it still stands at the head of the list for excellence of work, materials, workmanship, durability and price.

By referring to the advertisement of the manufacturers in this and the last number of the Cultivator, will be seen the high estimation put upon them by committees and plowmen, as well as their very general use where they have become known.

It is but just here to state, that in the most important trials in New England, the plowmen are required to use the same plows and teams which have been used on their farms, not less than sixty days previous to the trials. The owners are required to hold their own plows, to perform a certain amount of work, usually one-eighth of an acre of a given width and depth of furrows, in a given time. All of which rules and regulations are made known months before-hand, thus avoiding very many difficulties which often arise in deciding who really merit the awards and premiums.

A full and complete assortment constantly on hand and for sale at *manufacturer's home prices at wholesale and retail*, at the Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, by

April 1. H. L. EMERY.

183 FRONT-STREET, NEW-YORK.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of Agricultural Implements of the latest and most approved patterns

Plows adapted to every description of soil, embracing a greater variety of patterns than can be found in any other establishment in the United States.

Moore's highest premium Plows.
Freeborn & Hitchcock's do.
Minor, Horton & Co's do.
Ruggles, Nourse & Mason's do.
Prouty & Mear's do.
Subsoil do.

Two and Three Furrow Plows.
Side Hill and Double Mold do.
Cultivators with Steel and Cast Teeth.
Harrows plain and double hinged
Garden & Canal Wheelbarrows.

Single and Double Corn Shellers, price $5 to $10.

Straw Cutters, Greene's, Steven's, Sinclair's, and other approved patterns.

Mills for grinding Grain. Corn and Cob Crushers.

Horse Powers and Threshing Machines.

Fanning Mills,
Rice do.
Coffee Hullers,
Sugar Mills,
Grain Cradles,
Seed Sowers,

Revolving Hay Rakes,
Hay and Manure Forks,
Scythes & Snathes,
Ox Yokes and Bows,
Log and Trace Chains,
Spades and Shovels.

Plow Castings, Castings for Horse Powers, Mill and Gin Geer, &c., &c. Also on hand and made to order, every description of Brass, Copper and Iron Wire, Cloth, Sieves, Screens, Riddles, &c., &c, all of which will be sold as low as they can be purchased at any establishment in the country.

JOHN MOORE,
Ag. Warehouse, 193, old No. 183 Front-st., New-York.
April 1—3t

THE GENUINE MORGAN HORSE,

GENERAL GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of George A. Mason, two miles northeast of Jordan; Thursdays, Fridays and Saturdays at the stable of D. A. Munro, Camillus.

Terms—$10 the season. Insurance to be agreed upon. Pasturage furnished by either of the subscribers at reasonable prices. Escapes and accidents at the risk of owners. General Gifford was sired by *Gifford Morgan*. His dam a pure Morgan. Breeders of good horses are invited to call and see him.

April 1, 1848—3t. MUNRO & MASON.

JOHN MAYHER & Co's.

Highest Premium Improved Eagle Plow,

Manufactured and sold at the United States Agricultural Warehouse, 195 Front-St., N. Y.

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to out out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island October, 1847, whose able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the whole Union,) running in its natural course, and keeping in its tru position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Sneaths, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER & Co.,
United States Ag. Warehouse, No. 195 Front-st., N. Y.
March 1, 1848—3t.

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WATER PIPES FOR HYDRANTS, PUMPS, &c.,

Of	⅜	in. calibre, and	wg. from	1 lb.	8 oz.	to 3 lbs.	8 oz.	per yd.
"	½	do	do	1	14	6	6	do
"	⅝	do	do	2	8	8	4	do
"	¾	do	do	3	8	10	8	do
"	1	do	do	5	10	14		do
"	1¼	do	do	6	12	17	8	do
"	1½	do	do	11		19		do
"	2	do	do	16	12	27		do
"	2½	do	do	23	8	50		do
"	3	do	do	28		59		do
"	3½	do	do	45		80		do
"	4	do	do	49		90		do
"	4	do	do	waste pipe.		15	14	do
"	4½	do	do	do		17	4	do
"	5	do	do	do		34		do

Prices of the above pipe 7 cents per lb. A. B. ALLEN & Co.,
May 1—2t, 189 & 191 Water-street, New-York.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to rail-road or water communication, to improve their lands. For further particulars address G. M. BIGELOW,
May 1, 1848—6t. Cabotville, Mass.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers. E. J. BURRALL.
Geneva, April, 1848—6t.

FIELD AND GARDEN SEEDS.

POLE and Dwarf Beans, Beet and Mangel Wurtzel, Cabbage, Carrot, Cucumber, Melon, Onion, Peas, Pumpkins, Radish, Ruta Baga, Squash, Tomato, Turnep, and a great variety of other Seeds of the best kinds for sale at the New-York Agricultural Warehouse and Seed Store, 189 and 191 Water-street, New-York
May 1, 1848—1t. A. B ALLEN & CO.

DEVON BULL FOR SALE.

THE subscriber offers for sale a full blood Devon Bull, one year old in March last. He is a fine animal, got by a bull bred by G. Patterson, of Maryland, and out of a superior Devon cow. The price will be $75 if applied for soon. Address, post-paid,
W. L. COWLES,
May 1—1t. Farmington, Conn.

IMPROVED STOCK FOR SALE.

THE subscriber will take orders and execute them in the best possible manner, for—

Durham, Hereford, Devon and Ayrshire cattle. Price from $50 to $300 each, according to age and quality.

Saxon, Merino, Southdown, Leicester, and Cotswold sheep. Price from $10 to $30 each.

China, Sussex, Berkshire, and Lincoln pigs. Price per pair at three months old for the three first mentioned breeds, caged and delivered on board ship, $20. Price of the Lincolns, $30 per pair. These last are of a recent importation—color white, and grow very large.

All orders must be accompanied with the cash.
SAMUEL ALLEN,
mjulysept. 189 Water-street, New-York.

SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England,) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.
Troy, May 1st, 1848—4t.

AGRICULTURAL IMPLEMENTS FOR SALE.

SEED SOWERS of different kinds, operated by hand, and arranged for sowing all sorts of Garden and Field Seeds in drills. They sow with equal accuracy, and with much greater rapidity than by hand. Price $4.50 to $15.

BACHELDER'S CORN PLANTER, operated by a single horse. This machine can be regulated to drop the corn in hills from one foot to four feet apart. Price $16.

ONE HORSE CULTIVATORS of various kinds. Price $5 to $8.

HAND CULTIVATORS for garden work. They may also be used for field work. This is quite a labor saving little machine. Price $3.

CAST IRON ROLLERS in sections one foot long, 18 inches in diameter, and weighing 86 lbs. per section; sections of the same length two feet in diameter, and weighing 160 lbs. per section. These can be strung on an iron shaft two inches in diameter upon which they turn. They are fitted up for hand or horse power; and may be from one to eight feet long or more. The superiority of a roller made of several sections is very great. Price 4 to 5 cents per lb.; fittings extra.

SQUARE AND TRIANGULAR HARROWS of various improved kinds. Price $5 to $15.

PLOWS AND OTHER AGRICULTURAL IMPLEMENTS, a large and complete assortment.

A CATALOGUE of the above of 100 pages, with numerous illustrations. This will be sent gratis to all who apply for it, post-paid.

New-York Agricultural Warehouse and Seed Store, 189 *and* 191, *Water-Street.* A. B. ALLEN & CO.
May 1, 1848—1t.

BLACK HAWK.

THE celebrated horse BLACK HAWK will stand for mares the ensuing season at my stable in Bridport, Vermont. Owners of mares at a distance can depend upon their receiving the best of attention if sent to this horse—pasturing and attention to mares, 25 cents per week. DAVID E. HILL, Agent.
May 1—1t

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, JUNE, 1848. No. 6.

THE FARM OF CLARK RICE, ESQ.

MESSRS. EDITORS—I was much gratified, in a recent visit to the farm of CLARK RICE, Esq., in Dummerston, Vt., to find so triumphant an illustration of the profitable results of enterprise and good judgment, in seizing hold of the natural advantages of the farm, and appropriating them to use. These advantages consist in an abundant supply of swamp muck of fine quality, and the power to obtain and hold a large quantity of *surface water* for the purpose of irrigation. Mr. RICE's farm is mainly a grass farm, hay being the most profitable crop for his location and soil, and his operations are therefore conducted with a view to the raising of a large burden of grass, of good quality.

He has recently erected new barns which are remarkably convenient and well arranged; the main barn is 160 feet in length, east and west, by 30, feet in width, with ample shed lofts, and a horse barn and carriage house annexed. The ground upon which the barn is built is descending to the east, and under a portion of it is spacious barn cellar for the manufacture of compost, 100 feet long by 30 wide, open 24 feet on the southeast end; the lower side, or east end of the barn-yard, being on a level with the cellar bottom, affords a convenient passage into and out of it from the yard.

The liberal use of muck enables Mr. RICE to sell off large quantities of hay without detriment to the farm. He usually winters from 30 to 40 head of cattle, however, about half of which are stall fed, and the manure from these, composted with muck, together with other means of making compost hereafter described, affords him all the manure necessary for the improvement of his land, making and applying about 500 loads annually.

Management of Muck.

His bed of muck covers a number of acres from 6 to 8 feet in depth, and is a vegetable deposit of the finest quality. The original growth of timber on the adjoining land, was hard wood mainly, and whatever wash there may ever have been of an extensive area of higher land around the swamp, would naturally flow into it. Excellent arrangements have been made for the thorough drainage of the swamp, which will be more particularly described in speaking of his system of irrigation. The main body of the muck, except from March to the middle of June, when the gates are shut and the swamp filled with water for irrigation, lies high and dry from moisture to the depth of 5 or 6 feet, and can be got out at any time of the year, when most convenient to do the work. Two or three times in the course of of the winter, a quantity sufficient for a layer of a foot in depth over the whole cellar, is taken directly from the swamp on sleds, and thrown in, it being but a short distance from the barn, and the ground a little descending. In the fall, a coat of muck a foot in depth, is deposited over the cellar bottom, and when a sufficient quantity of manure has accumulated under the scuttles in the stable floors to cover the muck 8 or 10 inches thick, the same is spread, and another coat of muck put over the manure; repeating these operations from time to time, through the winter and spring, until the cattle are turned to grass. An immense quantity of compost is thus formed, and, judging from the smell and appearance, of the finest quality. A part of the muck is dumped through a scuttle in the barn floor into the cellar, and a part is thrown in through windows in the underpinning, and what cannot be conveniently spread from these heaps with the shovel, is taken up on wheel barrows, running on a plank, and distributed in due proportion; the design being to incorporate two parts of muck to one of manure. A larger proportion of muck is kept under the stable floors, where the urine flows, than elsewhere, and this saturated muck is spread into the middle of the cellar from time to time, in order to equalize the whole mass.

The compost lays in this state until after the spring work is done, when at odd jobs, such as rainy days and other days of leisure, it is forked over from end to end. After haying, it is carted out on to the land where wanted for the next spring's use. None of it is applied to the soil until a year old—Mr. RICE' being of opinion that composts, where large proportions of muck are used, require to be fully ripened by age and fermentation, in order to derive the greatest benefit from their application to the soil.

Mr. RICE has been in the habit of applying 50 loads to the acre; 25 loads spread on the turf and plowed in, and 25 loads spread on the furrows and harrowed in. He has come to the conclusion, however, from recent trials with a view to ascertain the proper depth to bury compost, that he shall in future introduce the plow two or three inches deeper in breaking up his sward land, which his present facilities for making compost will warrant, and spread the whole dressing on top of the furrow, incorporating it thoroughly with the soil above the sod.

The building appropriated to the horse barn and carriage house has a cellar under the whole of it, and the manure of two or three horses goes into the part under the stables, into which muck is also thrown, from time to time, and 6 or 8 working hogs are faithful to their business of mingling and pulverizing the materials with which they are supplied. Bedding is freely used under the horses to augment the mass. Under the carriage house is the feeding apartment, also a kettle and arch for cooking their feed, and storage for the materials.

There is still another cellar adjoining this, which receives all the wash of the house and the night soil, and which is liberally supplied with muck to absorb it as occasion requires. The objection to such places generally is that they are difficult of access, but in this case it is entirely obviated, the cellar being sufficiently capacious to back a cart into it.

The barn-yard is constructed differently from any I have before seen. The main yard, where the fatting cattle run, is slightly descending to the east to another yard, which is well supplied with muck, and is calculated to receive the wash or superabundant moisture of the former. This arrangement gives him a yard free from mire and water, which at certain times is deemed essential to the comfort of the fat cattle, and to his own comfort and convenience in carting to and from the barn such large quantities of hay, &c. During the day the coarser forage of the farm is mainly fed out in the lower yard to the cows and young cattle, which run there, and the refuse of it is incorporated with muck by the treading of the cattle. Occasionally in the course of the winter, a moderate coat of muck is spread over it, this being deemed better policy than to put the whole quantity of muck that the yard will bear into it at once, in the fall. After planting in the spring, the contents of this yard are carted out into a heap for fermentation; it is immediately supplied with muck again, and the cows are yarded on it over night through the summer, excepting when too wet and miry from heavy rains, when they are for a few days turned into the upper or dry yard. In the fall, the contents are again carted out, and a fresh covering of muck put in for winter. The litter, &c., of the upper yard is also carted out in the spring and composted with muck, in all cases designing to use two parts of muck to one of manure.

Irrigation.

Mr. Rice's system of irrigation is in the highest state of perfection. At the breaking up of winter quite a brook is formed from the rains and melting of the snow. It may be termed surface water from the adjoining high lands, and probably its marked effects in increasing the quantity and quality of grass, may be attributable in a great measure, to the fact that it is thus formed, and not a living stream fed by springs.

A large embankment of earth has been thrown up on the lower side of the swamp, the other sides being surrounded by higher lands, and thus a large reservoir is made into which this temporary stream is conducted, and with which it is filled in March, and after, to the depth of several feet. Gates are constructed in the embankment to draw off this accumulation of water as wanted for irrigation, and they are also calculated for the thorough drainage of the swamp. The water is conducted in ditches at different heights, over 50 acres of grass land, which lies more or less descending from the swamp. The ditches run across the land at right angles with its descent, and the water is taken out of them by small outlets, made at suitable distances in the lower sides, so as to flow gently over the whole land.

The water is not let on to the land till after the frost is out in the spring, on account of its liability to wash holes by getting under the frozen ground; neither is it continued on the land after about the middle of June, or when the grass has grown so as to cover the ground completely; if continued on longer, the quality of the hay is injured. Mr. Rice considers that the greatest benefit is derived from the irrigation in April and May, on account of the early and vigorous growth it imparts to the grass;—this effect is no doubt increased greatly from the fact that the temperature of the water is considerably *warmer* by standing in the reservoir.

Care and judgment is necessary in managing the irrigation. Mr. Rice frequently passes over the land when under the process, and if any part of it is getting overcharged with water, it is taken off, or if any part is not receiving its portion, the same is supplied as soon as discovered. When heavy rains occur during the irrigation, it is stopped for a time; the object being not to drown the grass roots at all, but to keep them gently moistened.

The contrast between the irrigated land and the land adjoining, which is above the highest ditch and cannot be flowed, is very striking. The latter, although lying more level, and oftener plowed and manured, will not cut as much grass by one-half as the former, neither is the quality as fine. The irrigated land can be kept in productive mowing, much longer than other parts of the farm that have not the benefit of the water, it is occasionally plowed and manured however, and goes through a rotation of crops—no water being let on to any portion that may be under a state of tillage, until it is again in grass. The crop of grass on the irrigated land is not affected by any drouth, however severe, that may occur after the water is taken off,—the land having been well saturated, and the grass completely covering it, prevents the moisture from evaporating. The burden of hay is very heavy, and the quality excellent; the tendency of the irrigation being to produce a thick and fine bottom.

Seeding to Grass in August.

Mr. Rice has several acres of grass land too moist to plow and cultivate in the spring. He obtains fine crops of hay from this land by plowing it in August, when a light coat of compost is spread on top of the furrows and harrowed in; the land is then stocked down to grass again, without sowing to grain. The new seeding is fit for the scythe the next season, although later than the old fields. The process is repeated about every fifth or sixth year, or as often as the more valuable grasses are supplanted by wild grass. He considers this by far the best management of a moist soil.

Improvement of a light, hungry soil.

He has a piece of land rather inconveniently situated to get at with manure, upon which he is trying the following experiment to redeem it from a state of comparative sterility: it is sowed to rye in the fall, and stocked with clover early in the spring; the grain is taken off the next harvest, and the next year after, the growth of clover is plowed in and the same process repeated. The plan has proved very satisfactory thus far, the land yielding more than double the crop it did five or six years ago.

Planting a Forest.

Mr. Rice had, a few years ago, a piece of side hil in pasturing, of rather thin unproductive soil, which he plowed up and sowed to rye, at the same time planting to chestnuts in rows about four feet apart. After the rye was taken off the land was left to run up to a forest. The first growth or sprout from the chestnut was rather crooked and scrubby; but by cutting it close to the ground new sprouts started which grew straight and thrifty, and there is now a good prospect of a fine growth of chestnut timber—an article which is becoming more and more valuable in this section of country.

I have thus given a very imperfect sketch of some of the more important operations of this intelligent and prosperous farmer. His enterprise and skill in the use and application of his muck, together with the appropriation of his natural advantages for irrigation, have told wonderfully upon the productiveness and profit of the farm. Some twenty years ago he commenced operations on a worn-out farm, the whole produce, all told not filling the barn then on the place, 60 by 30 feet and now, with all his ample barn room, he has none to spare. Among other things, his operations show in a striking manner, the great advantage to be derived on our worn out soils, from a liberal and judicious use of *swamp muck*, and the importance and profit attending a strict husbandry of all the resources on the farm for making and saving manure.

In the language of the chairman of the committee of our agricultural society, for awarding premiums on manure:—"Every animal in the house or in the barn, on this farm, contributes something to swell the immense heap."—"We hope our farmers will soon learn that the process of making manure is not an impoverishing, but an *enriching* process, as is proved in the case of Mr. RICE, of whom his neighbors used to prophecy that this muck-hole would send him to jail. It has proved however, that in digging muck, he was digging money, instead of landing in jail."

It is evident to any one, in conversing with Mr. RICE and witnessing the operations of his farm, that he unites extensive agricultural reading with the most close and minute observation. He is a hard-working, practical man; and he has adopted no new theory or practice simply because *new*, or continued in an old one because old; but with excellent sense he has adopted those suggestions, from whatever source derived, that seemed applicable to his soil and condition. Starting in life with nothing but a willing mind and a doing hand, he has risen to his present position by the force of his own enterprise and good judgment. He has been compelled to advance slowly and cautiously in his improvements, making them no faster than they would pay for themselves, and now he has a farm and plan of operations that may safely challenge competition.

In this example we see, forcibly illlustrated, the value of agricultural reading, to the farmer who has the good sense to follow those suggestions that are applible to *his* soil, location and means. It is not to be expected that every practically written article published in an agricultural journal of wide circulation, can be of universal application, for soils, localities as to markets, &c., &c., must necessarily vary. The farmer, therefore, who fails to exercise suitable judgment in following the suggestions of others, has mainly to blame himself, probably, if he meets with disappointments; and instead of commencing a tirade against everything that is written by others, he may as well exclaim of himself:—

> "Poor Johnny Raw, what madness could impel,
> So *rum* a flat to face so prime a swell."

How many young farmers, commencing in life with heavy mortgages upon them, pursue the mistaken course of cutting off their wood and timber, plowing up their pastures every few years for a grain crop, without even sowing grass seeds, and inventing every other possible means to cheat "mother earth" of a crop, without returning her any equivalent;—in other words, "destroying the goose that lays the golden egg,"—and all from the plea that they are in debt. Let all such be reminded by the example of Mr. RICE, that this is not the true policy. Like him, let them seize hold of every means the farm affords for making and saving manure, thus increasing the crops and the reward of their labor, affording a more sure and expeditious means of liquidating mortgages, with a farm left worth cultivating; a farm upon which they may live in independence, with the pleasing reflection, in the evening of life, that theirs is an example safely to be followed by their children.

Further remarks, suggested by the example of this farmer, might be pursued, but the unwarrantable length of this communication admonishes me to forbear.

F. HOLBROOK.

Brattleboro, Vt. January 6, 1848.

MANUFACTURE OF CHEESE.

(*Mr. Fish's Essay, concluded from page* 154.)

PRESSING.—When curd is properly tempered for pressing, a cotton or linen cloth is spread over the hoop, the curd is put in and pressed with from three to twelve tons weight, turned twice in eight-and-forty hours, into clean dry cloth. The press should be sure to follow down as the curd yields (when young,) to press out whey before a rind is formed to prevent its escape. There is no danger of too much pressure, *after the first ten minutes*. The press, hoops, cloths, &c., should be cleaned with lye *often*, to keep the rind from cracking. The cloth is taken from the cheese when it is taken from the hoop. The cheese is set on the table for a few hours until dry enough to absorb oil, and then painted with annatto, mixed in strong lye, (from common ashes) kept in a jar for ready use. This toughens the rind so that it will not require much grease after the first coat, to become smooth, if rubbed often with the hand moistened with oil.

The paint will fade to a rich butter color, which is as high a color as is desirable. A firm rind may be formed upon cheese when young, by a careful exposure to drying air, frequently rubbing with the hand, and no more oil than will readily incorporate with the rind. If more grease is used than will be taken up, it will sooner or later flake off, leaving the cheese scabby without rind, exposed to cracks, flies, mould, &c. Oil for greasing cheese is obtained from cream skimmed from whey, (after standing 24 hours;) it is churned till separation takes place like butter, then melted over a slow fire till it is turned to oil. A preparation of beeswax, from ⅛ to ¼, mixed with oil, will make a rind impervious to flies.

It is most desirable that cheese designed for foreign markets should be in proportion half as thick as they are wide, and not to exceed 100 lbs. in weight. The size of the hoop may be calculated from the number of gallons of milk; each gallon will make one pound of cheese. A cheese

21	inches	wide will weigh	14½ lbs	to each inch	in depth.
20	"	"	12 lbs	"	"
19	"	"	10½ lbs	"	"
18	"	"	9 lbs	"	"
17	"	"	8 lbs	"	"
16	"	"	7 lbs	"	"
15	"	"	6 lbs	"	"
14	"	"	5 lbs	"	"

Cheeses of the above proportions are banded with cotton cloth to keep them in shape. The band should not cover more than an inch or inch and a-half of the flat surface. Heavy cheeses must be banded with cloth that will not stretch, or their weight will make them ill-shapen.

In April, 1847, I divided curd into two equal parts, after it was salted, and ready to press, and pressed in equal and varied shapes to ascertain the result of varied heat, salt, &c. April 24th, (see schedule of April.) No. 1 was kept in a room of from 90 to 100 degrees heat; did not huff, but not having rennet enough to keep pace with the heat, soured, was hard, dry and smart; shrunk twelve per cent in sixty days. No. 2, kept in temperature not exceeding seventy-five degrees, did not huff, cured slow, was soft and mild flavor, shrunk nine per cent in ninety days.

April 26th, doubled rennet; put cheese No. 3 by side of cheese No. 1; No 3 huffed in three days, in twenty days run oil, tainted and spoiled. No. 4 put with No. 2; huffed, cured quick, and was light, porous and sharp. Doubling the amount of salt would control rennet, and keep cheese from huffing; but did not prevent them from souring, becoming hard and unmerchantable. The time of curing was in proportion to the amount of heat and rennet used. Some of the high salted cheeses in a hot room, *were bitter;* but none in the cool room had that flavor, were long curing, shrunk less, and were of better quality. The same course was taken in August, by dividing several days' curd, *each* day into three equal parts, pressed alike, and exposed to different temperatures in curing. The result was in favor of a medium rate of salt and heat, high salting and heat, making hard smart cheese; low salting and heat, soft, mild, and tasteless; low salting and high heat, porous, soft and sharp.

In 1845, the experiments alluded to, with sixty dairies, being got up expressly for shipment, a selection was made from the largest and most experienced dairymen in thirteen towns. A vigorous effort was made to reduce the whole practice to one general rule, consisting in *strict cleanliness in every department*, an equilibrium of heat in milk to set, not exceeding 90° with pure rennet to curdle milk in forty minutes; curd thoroughly worked by hand till as fine, when scalded, as wheat or corn; curd scalded in whey, with heat not exceeding one hundred degrees, and that heat held until the curd appeared shrunk, and would squeak when pressed between the front teeth. The whey to be drained off, and the curd salted while warm, with 2½ lbs. of refined salt to 100 lbs. of cheese, cooled and pressed forty-eight hours. Cheese half as high as wide.

These leading points, strictly adhered to, were found adequate to produce the article required, where curing rooms were constructed so as to preserve a *uniform moderate temperature*. The cheese, not affected by extreme changes of climate, fermented slowly and uniform, rind firm and smooth with little grease; texture firm and solid, yet malleable like butter; the flavor mild and pleasant. The weather being cool till June, a great uniformity was manifest in shape and texture. A sudden change of weather to 88 degrees, lasting several days, produced a contrast in different dairies, equal to the extreme in temperature, which was found in many dairy rooms to exceed the common atmosphere from 8 to 10 degrees. With little or no ventilation in these, cheese were much swollen, and could be kept in shape only by using *less rennet and more salt*. The *huffed cheese* remaining in same rooms become tainted,' or generated a sharp, unpleasant flavor; those removed to a temperature suited to their constitution cured quick, and were well adapted to early home markets. Those salted high enough to stand the excess of heat, were hard, dry, crumbly and smart. A dry room was found best for a wet cheese, and a damp room best for a dry cheese; but in no case was a high temperature, (exceeding 75°) found necessary.

These and like experiments, too numerous to detail, confirm my conviction that much of the bad flavor complained of in the American cheese, may be prevented with proper attention to curing. In addition to the extreme changes of weather in our climate, which are more than sufficient to destroy the constitution of a well manufactured cheese, the practice *too generally prevails*, of placing cheese in some loft or upper room, least needed for other uses, and often next to a roof where heat concentrates, and cheese becomes *literally baked*. I deem such rooms best as are calculated to preserve an *equilibrium of low temperature*. A tight, spacious, studded and plastered lower room. well ventilated, with northern exposure, where heat may be increased, and air dried by fire and ventilation, or cooled and dampened if required, by air from an underground or adjoining room, where ice may be kept, is *best adapted to this climate*.

Having previously written at considerable length upon *general treatment, adaptation of food*. I shall not here go into a lengthy detail, but a few hints may not be inappropriate. The success of dairy-men depends much upon adapting their practice to the provisions of nature. Cows should be in a condition to yield the greatest flow of milk, upon the cheapest and most spontaneous productions from the earth. Maize, manglewurtzel, cabbage, carrots, and ruta bagas (of the cultivated crops) yield the largest product per acre, and from the various periods at which they arrive at maturity, are well calculated to protract the flowing of milk till late in the season. Those most perishable to be used first. It is proved by experiments that a cow will give the most milk from the same amount of food, during the first sixty days after having calved. My cows yielded 45 lbs. milk per day the first of March, on 25 lbs. of good hay and 4 quarts of provender in slops. The first of June they diminished in quantity, and the first of November on same feed, they gave only 20 lbs per day. Other cows of equal quality coming in from the middle of April to the first of May, gave, on the first of June, 55 lbs. of milk on grass only, and held a good flow of milk through the season. On the first of December they gave 20 lbs. of milk each, while those in milk the first of March were nearly dry, upon the same feed, proving conclusively, that cows in general, will yield more and better milk from the first of May to January, than from first of March to January. The months of March and April require much more labor and grain feed, that would otherwise turn to money. *Nature* provides in *spring time*, a principle of *general progressiveness* in the animal and vegetable kingdom. The thriftiest growth of spontaneous products is in May and June, and cows should then be in a condition to receive its aid.

If seed of a spring crop is sown too early, the crop will be stinted; so with cows that calve in February and March. Nature having made its master effort in the animal economy, it cannot be revived again in spring-time of vegetation, and in the fall, when farmers have more or less of coarse perishable food, like pumpkins, apples, etc., they are not in as good condition to yield milk, as when they are started late, and their milk is kept up by sowed corn, or other succulent food.

I realized the greatest nett product of cheese in my dairy in 1844 and 1845. Commencing April 20th with half my cows in milk, average yield in 1844, 700 lbs. per cow, market weight. In 1845, average yield 775 lbs. per cow, weighed daily from the press, averaging five lbs. per cow per day during the first five months.

No *one kind of grass* or other food is found to produce as much or as good milk, as good pasturage upon soil yielding a great variety of grasses, each maturing at different periods, and furnishing in their turn the *flower of feed*, from which the finest flavor of butter and cheese is derived. Such soils are prevalent in this county, where the land is elevated and not over worn with tillage. Low, marshy grounds, and those having a northern or northwestern descent are exceptions.

A difference of from five to ten per cent is frequently shown by the lactometer in the quality of milk from neighboring dairies, the proof being in favor of those *best fed and cared for*. The practice is prevalent among dairymen of pasturing the low, wet and shady portions of their farms, (if they have such,) and using for meadows the more aired portions. In some locations, it is impossible to make a fine flavored cheese. The curd works tough and stubborn, and cheese is invariably of a harsh rank flavor. If this practice should be reversed, and the low lands used for meadows, and the elevated, warmer portions grazed, no doubt a great improvement would be made in our dairy products.

More care is required in working curd where whey and grain is fed, than when cows are grazed, as the milk is richer, and the cheese more apt to be harsh-flavored; when cows *are in heat*, their milk should not be put with the rest, till thoroughly cooled. It is often *rank and bitter*, and will sour in a few hours. If cows eat salt largely, beware of soft leaky cheese; it retards the effect of rennet to decompose. Salt should lay by the cows that they may take a little daily. Corn sowed *in drills* will produce more milk, arising from cultivation and the effect of sun and air. If fed when too old, it is not succulent, and will dry up the milk.

WASHING AND SHEARING SHEEP.

These operations are frequently performed at an earlier day than is proper in this latitude. Cold storms and frosty nights are not unfrequent with us till June, and before the middle of this month, we think it is unsafe to deprive sheep of their winter covering. The exposure and suffering which they are often obliged to endure after being shorn, is very injurious, sometimes producing deep-seated and fatal diseases, and in other cases suddenly overpowering the system and causing immediate death. Even with all practicable precaution the animal experiences a great transition, which must be very trying to the constitution, under the influence of cold and moisture. In fact scarcely a season passes that we do not hear of numbers of newly shorn sheep perishing from severe weather.

The process of washing, when sheep are immersed in very cold water, is also prejudicial to their health, and is besides objectionable from the imperfect manner in which the work is done under such circumstances. Exposed to undue cold, the men are impatient to get through their disagreeable job, and they hurry along without sufficient regard to the cleanliness of the fleece. The wool too, is by no means so readily cleaned in cold water as in warm. It is best, therefore, to defer washing till the water is raised to at least a *bearable* temperature. A shallow stream of soft water, in which, by means of a dam, the requisite depth can be obtained, is preferable.

It is proper that the ground at the bottom and around the water where the sheep are washed, should be of such a nature as not to render the water impure, and that the sheep may pass out after being washed without any mud or dirt coming in contact with their fleeces. To secure these objects, the reservoir is sometimes paved, extending the stones above the edges of the water till they are made to join a clean firm sward. Sometimes a cistern or vat, for washing sheep, is constructed and placed at the foot of the dam, and the water conveyed into it from the reservoir. We have seen sheep very nicely washed on this plan.

It is useful to sprinkle water on the sheep after they are collected for washing, and let them stand for a few hours before they are washed. This dampening of the fleece causes the impurities to separate more readily on washing, and the wool will appear beautifully white and clean. Leaving the sheep out in a warm rain, and washing them soon after, generally cleanses the fleece well.

Fine-wooled, or Merino and Saxon sheep, require much more attention and labor to wash their fleeces perfectly clean, than the coarser-wooled English sheep. The long-wooled varieties, as the Leicester, Cotswold, &c., can be washed without much trouble, so clean that the wool will scarcely shrink in weight in the hands of the scourer—or in the process of preparation for the manufacturer—whereas ordinary merino wool loses from thirty to fifty per cent.

The sheep should be kept in a clean pasture after being washed, till they are sheared, which should be done as soon as they become entirely dry, and they will require from four days to a week for this purpose. The best shearers should be employed—such as will cut the wool sufficiently close to the body, without cutting the skin, and at the same time cut smoothly and evenly. Each fibre should be cut once, and but once. The short bits of wool which are sometimes clipped off by shearers are worthless, and the torture to which the sheep is sometimes subjected by cutting its skin, is not only cruel but really injurious.

When sheep have been shorn, it is best to allow them to remain for a few days where they can have the benefit of shade. Exposure to a hot sun, while the animals are comparatively naked, frequently blisters the skin; and besides occasioning the animal much pain, evidently injures the quality of the first growth of wool. It deranges the cutaneous secretions and renders the wool harsher and drier. If they are allowed shade, they will not expose themselves to the heat of the sun, as they graze only at night and early in the morning. Should a storm, or unusually cold weather occur, the flock should either have the shelter of woods, or be driven to their winter quarters at the farm-yard, till the temperature becomes more congenial.

In regard to *securing the fleece*, the following remarks of Mr. BLANCHARD, proprietor of the "Wool-Depot" at Kinderhook, are deserving attention.

"After shearing, the fleece should be removed to a table or clean smooth place on the floor, with the inner part down; then be gathered up into as compact a position as it occupied when on the sheep; the sides of the fleece should then be folded over, so as to meet upon the back of the fleece; the head and neck thrown back so as to make the fold upon the shoulder; next be folded or rolled from the butt of the fleece and continued until you reach the shoulder. The fleece should then be snugly tied with a small smooth twine, passing round two or at most three times. You thus have a compact fleece, easy to open, and the shoulder, which is the the finest part, upon the outside. Buyers always expect to see *the best side out*, and wool growers sometimes do themselves injustice by not thus exhibiting their fleeces. I do not believe that the manufacturers, as a whole, in this country, are yet prepared to pay a sufficient advance beyond the present prices, to justify the grower of wool to remove all the fribs, belly locks, and skirts from the fleece, as is done with the fine wools of Germany. I would therefore, at present, put inside of the fleece all the well-washed and clean wool shorn from the sheep—carefully excluding all such locks as are filthy, or below the residue of the fleece in condition."

The *regular growth* of wool, in order to produce a staple of uniform quality is of great importance. Mr. BLANCHARD, on the occasion of delivering the remarks we have above quoted, (one of the weekly agricultural meetings held in this city last winter,) made some good observations on this point. He showed that the size of the fibre varied with the condition of the sheep; that while the animal was full fed, and was improving in condition, the fibre would be larger and stronger, and that when growing poor, the fibre would be smaller and weaker; so that in many instances, we have several qualities in the same fibre. He took a lock of wool, and by twisting it from one end to the other, demonstrated the correctness of his statement. The lock was composed of a certain number of fibres of equal length, but they formed a thread of nearly twice the size in some parts that it was in others. The wool had been taken from a sheep that was well fed in summer and poorly fed in winter. Mr. B. said he had frequently seen flocks that were well kept for a few months after shearing and then run down and kept poor till they were sheared again. The fibre at the lower end was weak and tender, and the fleece was greatly lessened in value. But "when the condition of the sheep is good, and they continue vigorous and healthy during the whole of the year, the fibre of the fleece will be free and uniform in quality, and the fleece heavier and more valuable than when they are alternately changing from a high to a low state of flesh."

If *fine* wool is the object, however, the sheep should not be too highly fed, as actual *fatness* induces the production of a gross fibre. The aim should be to keep the animal at *all times* in a natural and healthy condition.

NATURE AND USES OF YOLK.—It is well known that the manufacturer desires to purchase his wool as free as possible from any other substances. Whatever may be the effect of yolk on the growth or quality of the fleece, the buyer does not want to pay for anything but *wool*, and of course makes a deduction from the price equal to what he supposes to be the weight of extraneous matters.

It has formerly been the custom in some sections, to breed a description of sheep, the fleeces of which were loaded to an extraordinary degree with animal matter; but the objection of the manfacturer to purchase this substance, has lately caused many wool-growers to prefer sheep which secrete but little yolk, and we think there is now some liability of the *fashion* running into an extreme in this direction.

The circumstance of the manufacturer not wishing to purchase yolk, is no proof that it is not necessary and useful for the production of wool. Take, for example, two fleeces of wool of equal fineness and quality, one of which, while it was on the sheep's body had a plentiful supply of this natural oil, and the other was destitute of it; which of the samples would really be most valuable per pound? Which would make the strongest and most durable cloth? No one can doubt that the latter would be altogether preferable for the purposes of *wear*, though perhaps this important point might not always receive its due weight with the manufacturer. In some instances he may pay more regard to those qualities in wool which will enable him to give his goods a handsome "*finish*," and to make the most yards from a given number of pounds. But we presume it will not be denied that light, dry wools have less strength than those which, while growing, are better supplied with yolk. Mr. YOUATT, in his treatise on sheep and wool, says:—"Where there is a deficiency of yolk, the fibre of the wool is dry, and harsh and weak; * * * where the natural [requisite] quantity of it is found. the wool is soft, and oily, and plentiful and strong." And again as to the uses of yolk, he says:—"It is not the inspissated perspiration of the animal; it is not composed of matter that has been accidentally picked up and that has lodged in the wool; but it is a peculiar secretion from the glands of the skin, destined to be one of the agents in the nourishment of the wool, and at the same time, by its adhesiveness, to mat the wool and form a secure defence from the wet and cold." LUCCOCK, also, (who is quoted by YOUATT,) observes that the yolk is necessary to the good qualities of the fleece, and that without it the wool becomes thin and light; "with it the fleece is full, soft and rich; * * and the qualities and condition of the wool are most wonderfully improved. From these circumstances we conclude that yolk is not only necessary to the production of a valuable fleece, but is the very pabulum of wool." He observes that the manner in which yolk acts upon wool is not accurately known. "Some," he says, "have considered it the superabundance of that substance which forms the filament, and which, by some unknown process, while the pile is growing, is consolidated into a transparent mass; while others conclude, perhaps more reasonably, that it is a peculiar secretion which exudes through the skin, and by intermingling with the pile, renders it soft, pliable and healthy, affecting it much in the same way as oil does a thong of leather, when kept immersed in it till perfectly saturated."

These remarks show the importance of the yolk or natural oil, to the growth and value of wool. But the fleeces of some sheep contain a secretion which is quite different from the *true* yolk above spoken of. It is a yellow, waxy substance, adhering to the pile, often attaching the fibres together so that their separation is difficult, and forming also a great obstacle to the thorough washing and cleansing of the fleece. It is frequently called *gum*. As it is not readily separated from the fleece by the action of water, it often adds much to the weight, even after the sheep are thought to have been "well-washed." Unlike the proper kind of yolk, it does not increase the strength and elasticity of the wool, but on the contrary, in some instances, by glueing the fibres together makes them liable to break in working.

But there is another point in this connexion which must not be overlooked. The character of the sheep, as to constitutional hardiness, &c., is in a great degree, indicated by the quality of the fleece. It is known to every observing wool-grower, that those fleeces which naturally contain the least yolk, are thin and light, and are produced by sheep of weak constitution. Such sheep require more delicate food, more shelter, and more care in all respects. On the other hand, those fleeces which are well supplied with yolk, are borne by hardy, strong-constitutioned sheep, which are able to bear exposure, and live and thrive on comparatively coarse fare. These characteristics render it an object of importance for the wool-grower to pay attention to the yolk in the fleece, both as affecting the quantity and value of wool, and the points on which the profits of sheep depend.

"Spare that Tree."

Following out the poetical sentiment above expressed, I would say to settlers on new lands, spare the beautiful trees. Select the site for your habitation, if the surface permits, on some gently-rising eminence, and if possible, in view of the "silver stream" or the "limpid lake," and with a park, you may have a lovely situation.

But how, says one, am I to eradicate the bushes and obtain a smooth, grassy lawn beneath the trees. Cut the bushes when the leaf is fully expanded, or during the season of their most vigorous growth. Pasture close with sheep, and you will be able to be rid of the under-growth in one or two seasons. Clear off the rubbish and sow grass seed, and you have done. I have a beautiful park of forty acres made in this way. R WATKINS. *Napoleon, Mich. April,* 1848.

PLANK ROADS.

We are indebted to Philo White, Esq., for a copy of a Report on Plank Roads, submitted by him to the Legislature of Wisconsin. This document furnishes a more full and complete exposition of the advantages of this description of roads, than we have before met with. The first question considered is, what kind of roads are best adapted to the present wants of the community? And though railroads are admitted to afford the greatest facilities under particular circumstances, yet it is concluded that there are many situations where a class of thoroughfares less costly, "and more practical *for every day use*," are called for.

The advantages of plank roads, over McAdam or stone roads, are, that the former can be made in all situations, without regard to the character of the soil; that they are less liable to be affected by frost, (which is sometimes very injurious to McAdam roads); and that they can be built and maintained at much less cost. It is calculated that horses will travel with wheel vehicles, one-fifth faster, and draw one-fifth more weight on a plank than on a stone road. "In fine," (says the report,) "plank roads are preferable to those of McAdamized stone in cheapness, in ease of draught and in comfort to passengers; greater speed being attainable on them with less assistance to draught; and stage owners say that they are less fatiguing to horses than stone roads, at the same rate of speed."

Plank roads, it is said, were first made in Russia; and their first trial in America was in Canada, where they were made by Lord Sydenham, who from a long residence in Russia, had become well acquainted with them, and was thoroughly convinced of their utility. We are informed that the Canadians are now so well satisfied of the great advantage of these roads, "that they have gone more extensively into the use of them than any kingdom or republic on the globe." These roads are chiefly in Canada West—the aggregate length of the different lines already constructed, being between 400 and 500 miles. We are not aware of the entire number of miles of plank road actually finished in the State of New-York, but this report informs us that the various lines for the construction of which companies have been organized in this State, amount in the whole to a distance of 500 miles.

As to the *width of the track*, or the length of the plank used, the report states that it has been shown "most conclusively, that for a single track, eight feet is preferable to a greater width," and that where a double track is wanted, it is best to make them separately of that width. The planks are laid across the bed at right angles. In regard to the necessity of more than one track, the report quotes the remarks of Mr. Geddes, in relation to the Salina road. Mr. G. observes "great speculative objection was made in the start to but one track; but we have now the entire community with us in deciding that, on all ordinary roads, one track is fully sufficient. The reason is this: the travel in wet weather is entirely on the plank, except the turning out of the light teams; but they seek the plank again as soon as they can get around the team met or overtaken, so that the turn-out track is not cut with any continuous lengthwise ruts, and perhaps the wheels of not one team in a hundred turn-outs will strike the exact curve of another; consequently, in our experience, our turn-out track being well graded, passing the water easily and rapidly from its surface, remains perfectly hard and smooth."

Sleepers or Stringers.—In one or two instances, roads have been made without sleepers—the plank being laid immediately on the graded earth. The planks have kept their places quite well; but it appears to be the conclusion that it is best to use sleepers or sills.

"The sills," (says the report) "should be well bedded in the earth, their top surface barely in sight, and the earth in which they are embedded should be broken and pulverized, so as to leave no stones or other hard substances to obstruct their settling evenly, and thus permitting the earth to sink down firmly on the earth as its main support. Two stringers only are used on the Salina road, 4 by 4 inches in size and none less than 13 feet in length; they should be so laid as to break joints, as in laying brick, or putting on siding that is, the ends of the stringers on one side should not be laid opposite the ends of those on the other side. About 6 feet 8 inches is the proper width between the two lines of stringers, for an 8 feet single track road, which will bring them under the wheels of most road vehicles, and thus give a continuous bearing on them. One set of sleepers of good timber and well bedded, will last as long as two or three plankings."

Grading.—It is directed that the road should be graded twenty-one feet wide, "measuring from the inside top-lines of the ditches on each side." Great care should be used that the road be kept dry by means of side ditches and cross culverts. They should be made fine, firm and smooth.

In regard to lengthwise grading, it is observed that short rises are sometimes made of one foot in ten, though they are generally from one foot in twenty to one foot in thirty. Mr. Alvord's remarks on this subject are quoted. "It is easier to go over the same elevation on a plank road than on a common dirt one; for on plank there is no cutting into the substance passed over, nor encountering of stones by the wheels; and if, as it ought to be, the plank way is covered with a slight coating of earth, the only danger suggested, the slipping of the animal, is avoided. It would be a prettier sight for the eye, were we to grade our plank roads more level; but while their practical utility is not lessened in any perceptible degree by their unevenness, economy forbids the expense of *levelling* them for *ornament*."

The *kind of timber* used for planks is oak, hemlock or pine. Oak lasts as well as any wood, but is *slippery* in wet weather. The wear by abrasion is calculated at one-fourth of an inch in two years; "and as planking will not break through till one-and-a-half or two inches of the surface is worn away, it follows that the duration of the plank, [if of pine or other soft timber,] would be eight years." Oak would generally last, it is thought, fifty per cent longer.

The cost of plank roads is estimated at from $1500 to $ 2000 per mile.

Plank Roads preferred by Farmers.—The opinion is advanced in the report that "railroads can never be made to take the place of teams for the transportation of grain, &c., within one day's drive of a market, because the farmer can carry the cheapest for that distance."

"There are seasons when work is slack with almost every farmer; yet his teams are daily consuming as much food at such time as when fully employed. Availing himself of these seasons, he can haul his produce to market with a very few shillings' expense, in addition to what would have been incurred had his team remained idle in their stalls."

The inducements for farmers to take stock in plank roads, are summed up as follows:

"Now in view of these facts and suggestions, it must readily occur to every farmer, within a reasonable distance of the line of a plank road, that he can better afford to take stock in such a company than any other of our industrial classes, because he can more cheaply pay for his shares,—by *working them out* on the road. Every head of a family, with his teams, scrapers, shovels, and other implements which are always at hand in the cultivation, &c. of his farm, could during those leisure times which every one occasionally enjoys, work out from one to a dozen shares, according to his force and proximity to the road, without any serious diversion of his attention from his regular vocation, or perceptive detriment to his crops. In fine, to all classes of farmers, no scheme was ever devised that afforded so rich an assurance of immediate and positive benefits to *them*, as the construction of plank roads in the neighborhood of their farms."

OXEN FOR FARM TEAMS.

Out of New England, a difference of opinion exists relative to the comparative value of oxen and horses for the business of the farmer, the great majority of agriculturists, by their practice at least, declaring their preference for horses. I say *out of New England*. because there I think the great majority of farmers maintain the opinion that oxen are preferable to horses for all kinds of farm labor. New England farmers are better acquainted with the real value of oxen, than farmers less accustomed to use them, and their opinion is entitled to consideration. In a communication made by the Hon. Levi Lincoln, of Massachusetts, to the Agricultural Society of Pennsylvania, he says: "So decided is the preference for oxen (here,) that I do not believe a single farmer can be found in this agricultural county, who performs his labor by horses without oxen; while there are *hundreds*, I had almost said *thousands*, who make no other use of horses in husbandry, than to furrow for planting, and plow among their corn for hoeing." This question of the comparative value of horse and ox teams, becomes an important one to the farmer, when it is recollected that the expense of his team, is a chief item in his yearly expenses. If ox teams are really more economical for the farmer, then a wide spread error exists, since in this, and in most of the states, horses are generally used, while oxen are either entirely unused, or but partially employed.

A common, and perhaps the prominent objection urged against the use of oxen, is that *they are constitutionally slow of motion*, and not to be depended upon in the oftentimes hurrying operations of the farm. As oxen are usually handled, there is something in the objection; it is believed, however, the fault is not a constitutional one, but the effect of injudicious training.

The common method of *breaking steers*, tends to make their movements slow. They are usually put into the yoke when two or three years old, and fastened at once to an old yoke of cattle, rendered slothful by labor or habit,—where they are worked until "broken," and forced to accommodate their movements to the tardy motion of the team that controls them. After having been tamed, and rendered obedient in this way, they are usually put to labor quite too severe for their age and strength,—and soon become "broken" in spirit. It is not strange that under such treatment, oxen are sluggish in their movements. By judicious training, oxen, as well as horses, can be taught to travel in any gait desirable for farm-labor; and any one unacquainted with the effects of careful training, with reference to rapidity of movement, will be astonished to see the difference produced.

The Devon breed of cattle has ever been esteemed for its working qualities, being excelled in speed at the plow, or even upon the road, by but few horses; and in their native country, it is said they are not unfrequently *trotted*, with an empty wagon, at the rate of six miles per hour. From this valuable stock, many of the working oxen of New England are believed to have sprung,—their color, form and action betraying their origin. Although the bulls of this breed are generally light, and the cows rather small, the oxen are large, furnishing all the size necessary and profitable for the yoke, and falling little, if any, behind their more pretending rivals, at the shambles.

Well directed experiments have demonstrated, that with proper treatment and training, the difference in speed between horses and oxen, in farm labor, is very little. Sir **John Sinclair**, in his account of Systems of Husbandry in the improved districts of Scotland, when giving the experience of practical farmers on this subject, says that the ox teams upon the farms in Wooden and Mellendean, *when along with the horse plows, never lose a turn*. The issue of plowing matches throughout the country, has it is believed, established the fact that oxen can plow a given space of ground *as quick and as well* as horses. While oxen are more or less used in farming operations in the vicinity where I reside, custom has entirely driven them from employment in transporting goods upon the public roads. I suppose the alleged *slowness of motion* of the ox, has led to his disuse in this particular. In the early history of this county, when the roads hence to the Hudson river were new—passing through forests and surmounting many of the steepest hill, my father, in his business, employed heavy ox teams as well upon the roads, as in his farming and lumbering operations. I find, upon examination of his papers, that his ox-teams, heavily loaded going and returning, made their trips to Catskill, a distance of 66 miles, in *six days*. frequently in *five days*, or traveling *twenty-two miles per day*. Horse teams consume, *on an average*, the same length of time now,—traveling over roads for the most part carefully graded and well-worked—roads ten miles a day easier for a team, than those in use from 1800 to 1812. The heavy six-horse teams traveling upon the National road make but fifteen miles a day. Ex-Governor Hill, of New Hampshire, in a letter upon the use of oxen in the lumbering business of Maine, (as the same is quoted by Mr. Skinner,) says: "I have at this time cattle of my own raising, which have been taught to step quick, and having worked in the same team with horses, will, side by side, travel as fast, and plow as much in a day as the same number of horses. A pair of these oxen, will turn over with a plow that carries twelve inches, of the last year's corn or potato ground, or easy stubble land, from one and a-half to two acres in a day, working eight hours, four in the forenoon and four in the afternoon. Oxen well-fed with hay, and a portion of Indian corn or meal, will in the heat of summer stand it to work daily from eight to ten hours."

Another objection urged against the use of ox-teams, is *their inability to withstand the heat*. So far as my knowledge or experience goes, this objection is not fairly made. It is a common practice with farmers, during the hurrying season of farm labor to grain their horse-teams, and take such other care of them, as tends best to strengthen their powers of endurance; while it is a like common practice, to *feed no grain to their oxen*,—tasking their utmost energies in field labor during the day, and then leaving them to seek in the pasture, between sunset and sunrise, a restoration of their exhausted powers. Such oxen are often found *lolling* in the forenoon, and are pointed to as illustration of the fact that oxen cannot endure heat! Smarting under the lash, irritated by the bawling of an inexperienced and cruel driver, with a hot sun over him, and a stomach filled with green fermenting food, the ox faints at his labor;—and very wise lookers-on, shake their heads and say, "he can't stand the heat." Sage conclusion, very! In India and China, in the West Indies, in South America, in Spain, every where under the tropics, oxen are used for draught, or as beasts of burden, and their powers of endurance are as great or greater than those of horses. J. S. SKINNER, Esq., on the authority of Commodore Jones, says, the cattle at Naples, employed in drawing timber for the government, constantly travel twenty to twenty-five miles per day, are as spirited and walk as quick as horses, and *appear not to suffer from heat more than a horse.* Mr. SKINNER also says, "the small, pale-red, old field ox about Salisbury, in Maryland, will travel twenty-five miles in a day, with heavy loads of lumber going, and returning empty, over the sandy roads of that region; while it may be affirmed, after particular inquiry, that the distance made by the heavy-bodied, grain-devouring Conestoga horses on the national road, between Cumberland and Wheeling, averages not over sixteen miles, six horses with loads of from six to eight thousand pounds." A distinguished Virginia agriculturist says, "A gentleman of my acquaintance had a mixed team of horses, mules and oxen; in each season his horses failed first, the mules next, although both were fed upon grain and hay; and the oxen, fed exclusively on hay and grass, *finished the crop.*"

When farmers become convinced that oxen, so far as farm labor is concerned, *are no slower*, or very little slower than horses, and *are as capable of enduring heat*, it is believed their chief objections to ox teams will be answered. To go to mill and to meeting they may need a horse, and for job work about their farms a single horse and a strong wagon will be found convenient.

In this connection, the difference in expense between ox teams and horse teams cannot but suggest itself to the farmer. In the original purchase of a *reliable* team, for farm work, the expense may be set down as follows:

Two horses at $85 00 each,	$170 00	Yoke of oxen, ...	$100 00
Harness for the same, ...	26 00	Yoke and chain, ...	8 00
Whiffle-trees and neck yoke,	4 00	Ox cart, ...	35 00
Farm or lumber wagon, ...	70 00		
			$143 00
	$270 00		

Difference in favor of oxen, $127.

Animals of the horse and ox kind can be purchased cheaper than my estimate, but teams of a *less* market price cannot be called *good* or *reliable* teams. The comparative expense of keeping horse and ox teams, and keeping them *well*, is as two to three; or in other words, it costs a farmer *one-third more* to keep a horse than an ox team. In this estimate I make no reference to the difference in amount of manure made by the oxen, they giving back to the farmer a far greater amount than the same number of horses. In the estimate of profit and loss, to the farmer, there is another view of this question, which commends itself strongly to consideration. His ox-teams, from the age of four to eight years, when constantly laboring in his service, are just as constantly increasing in value. Experience having shown that well-fed oxen, when *steadily worked*, increase in weight, as fast as those lying unemployed; and when too old for service, with good pasture for a short time, are worth their original cost in the shambles. Oxen are also considered less liable than horses to diseases of a fatal character, or to those producing permanent infirmity. I need not speak of the *value!* of an old, worn-out horse, nor of the total loss which is incurred by the owner when his horse fractures a limb, or dies from disease. While oxen, when too old for the labors of the field, have still a value sufficient to replace them by a young and vigorous team; horses worn-out, or diseased, are *worse than nothing!*

Meredith, N. Y., March 31, 1848. S. A. LAW.

Domestic Economy, Recipes, &c.

Preserving Dried Fruits.

In the March number of the Cultivator a correspondent wishes information in regard to preserving apples and other dried fruits, through the summer season, so that they will not become wormy:

The most effectual method I know of, is, when the fruit is dried and ready for packing away, as you put it into the barrel or sack, sprinkle it with whiskey—say at the rate of a pint to a bushel. We have tried this method for a number of years, and never knew it to fail; but when we neglected it the fruit always became wormy.

We have kept cherries, raspberries and currants for two or three years, perfectly safe in this way: I suppose any kind of spirits would answer the purpose, as the worms appear to go in for *temperance*. A SUBSCRIBER.

Another correspondent, who dates at Greenwich, and signs "AN OLD HOUSEKEEPER," writes—"I have kept them in perfect order for years, by putting them into a brick oven, after the bread has been baked, and letting them remain all night; afterwards putting them into linen bags which are hung up."

Another correspondent, C. J. says—"*Keep it from the flies.* I have kept apples in dry barrels or boxes with a piece of burlaps drawn tight over and tacked. They would perhaps keep still more safely *headed up*, but I have never tried that, apprehending some danger of moulding. Small quantities may be tied up in a tight bag and hung up. The same preventive applies of course to cheese, hams, &c. Tie a ham up in a tight bag, hang it up by the string of the ham; so that the bag will hang loose. If cheese inclines to crack, paste on good sound wrapping paper, in the same manner you would paste paper on the walls of a room."

Recipe for Preserving Tomatos.

In answer to the inquiry in the April number of the Cultivator, as to the best method of preserving the tomato, I subjoin the following receipt, which I have tried and found perfectly successful:

Prepare the Tomatoes as for cooking (without seasoning, &c.) boil them one hour, then put them in small stone jars, cork and boil the jars for 2 hours, take them out and seal them *air-tight*; when opened, season, &c. and cook for half an hour. A SUBSCRIBER IN SO. CAROLINA.

RASPBERRY VINEGAR.—The recipe for this very agreeable and useful article in the last number of the Cultivator, (page 160,) is deficient in one respect, viz. that it does not give the direction "*that the vessel in which it is to be made must be china or glass, and that no glazed or metal vessel is to be used in making or keeping it.*" Mixed with water it is one of the most pleasant drinks of summer, and moreover is of singular efficacy in complaints of the chest—a spoonful or two in a tumbler of water. P. *Perth Amboy, N. J.*

CULTURE OF INDIAN CORN—FARMER'S CLUBS.

Editors Cultivator—At a meeting of our Farmers' Club, on Wednesday evening last, our secretary being absent, I took his place for the evening; and the enclosed reports were put into my hands. I have to-day copied them, and I take the responsibility of placing them at your disposal for publication. I do it for the purpose of giving you a sample of the kinds of reports which are presented. They are not selected, but are the only ones left with the secretary on that evening. Our society is not large—not more than 20 or 25 members usually attending; but this is something for a quiet country village, with but few inhabitants.

The rule of our society is, to have two or three written reports on the subject for the evening discussion, which subject is given out at the preceding meeting. As yet we have not failed to have two or more at each meeting. After these preliminary reports, a familiar discussion of the subject ensues; and then the reports and discussion are referred to a standing committee, to bring in at the next meeting, a final report embodying the substance of the written reports and conversation. By having these preliminary reports, the subject is fully brought before the meeting, by the various suggestions (and sometimes conflicting ones) in them, and the result is, every one has something to say upon some one point or other.

The order of proceeding at our meeting, is this: after the reading of the minutes, the reading of the reports of the standing committee on the subject discussed at the previous meeting is the first business; then the preliminary reports on the subject for the evening's discussion; next, discussion in a familiar way; the subject for the next meeting is then given out by the chairman, and the writers named; then any miscellaneous business. The chairman sees that the members confine themselves to the question of the evening during its consideration, and then to other matters as they are presented, in order. All reports are put on file and preserved by the Secretary for reference. With this system the interest of our meetings has been well sustained, and the amount of information communicated has been a matter of surprise to us all. We have had no difficulty in drawing out the views of our practical men, and this is the secret of the success attending our efforts. I have been somewhat particular in stating our proceedings, as I have not seen any account of an organization like our own. The society was commenced with us as a matter of experiment, and as yet I think no one of its members is prepared to give it up, but evidently there is an increased interest manifested from one meeting to another. Should our example induce others to try the like experiment, my object in sending you this will have been accomplished.

Very respectfully yours, J. C. Hastings.

Report on the Culture of Indian Corn. Read before the "Clinton Farmer's Club," By Gaius Butler*, farmer.*

The aboriginal name of this species of grain clearly indicates its origin. As an article of food both for man and beast, but especially for the latter, it holds a preeminent rank. Perhaps the loss that would be sustained by an entire failure of this crop could not be exceeded by that of any other. The well known fact that it may be and often is perverted from its legitimate to a pernicious purpose, is no valid reason why it should not continue to be raised, and to the greatest practical amount per acre, not refusing to gather even one hundred and fifty bushels, if we happen to find it there.

With these preliminary observations, I proceed to offer a few remarks on the best method of cultivation.

And first, negatively. According to the ancient Mohawk Valley custom, in directing the wayfaring Yankee, pointing out the wrong ways and then the right one, I propose to name a few things with respect to this question, that ought not to be done.

Do not plant corn on a piece of wet ground; on such land, unless in extraordinary seasons a failure may be expected. If it may seem necessary to till such a piece of land occasionally, the location of which is such as hardly to admit of thorough draining, crop it with almost any thing but corn, which delights in a dry warm soil. Do not plant corn after oats if it can be avoided. Oats are an exhausting crop, and as land can hardly be made too rich for corn, it will be found difficult to raise it to that condition necessary to ensure a good yield. Again, in fields where the wire-worm has long had almost undisputed possession, it is not advisable to plant your corn, as they will very likely save you the trouble of harvesting. A stiff clay does not seem well adapted to this crop. It is liable to suffer greatly from drought on one hand and from excessive moisture on the other.

A deep gravelly or loamy soil is the most natural element for this grain. My course has usually been to plant after wheat, and generally, to say the least, have obtained fair crops, seldom putting in more than two acres a season, and sometimes but one, believing it far preferable to give the land that tillage which will return 60 to 80 bushels per acre, than to run over some two or three acres to obtain that amount. As a general practice early planting is best. The entire growing season is not ordinarily much too long to mature the crop. Still it is doubtless better to wait a little if necessary than to hurry in the seed without being fully prepared. If the land designed for corn is not plowed till spring, once thoroughly done will be sufficient. There is however little danger of harrowing too much. Though I have said land can hardly be made too rich for corn, yet I have several times seen injury result to it by an injudicious application of very coarse manure. I would not be confined to any particular mode of applying manure, but would first administer a pretty generous allowance broadcast, and afterwards of the finest and richest portions in the hill. In planting I would not stint the hill to the precise number of plants intended to stand. Perhaps the following rule may not be far from the truth—One for the worm, one for the crow, and four to grow. The field now being planted needs close attention; whether there be any virtue in scarecrows (so called) I am hardly able to say, though I generally go through the ceremony of erecting divers sorts of fixings for that purpose. The owner's foot for the time being I know to be efficacious; crows generally do their worst where the hills are superficially covered. As a preventive in some measure to their depredations and for security against drought, I recommend that corn be covered nearly or quite the depth of three inches.

The corn being fairly up, do not wait long for it to become large enough to hoe, get among it with the plow or cultivator, and it will soon reach the mark. The boy who had his head combed but once a month, wondered how any body could submit daily to the torment of such an operation. He did not reflect that the daily operation which he dreaded, saved all the pain. So to some extent is the business of hoeing. The common practice is to hoe but twice, and this has been my own, till within a few years. Supposing that to hoe three times would add about one-third to the labor of tilling. This I find to be a mistake; not only is the crop benefited by this course, but I have yet to learn that it causes any additional labor. A neighbor who usually planted in rows but one way and hoed twice, was induced a year or two since to change his method of planting, to rows both ways, and to hoe three times; one of the hands informed me that a gain of several days was made by the change, the same field having been in corn the previous year. Hilling corn is generally, and I think justly disapproved by writers on agriculture, and yet I find it difficult to hoe in such a manner as to leave the ground entirely level.

The last hoeing should be completed before the tassels generally appear. The labor of suitably preparing this ground for this crop, is not a trifling affair; but taking into consideration, the ample returns it is wont to make for all reasonable outlays, and that a succeeding crop is also at the same time amply provided for, there is every reason for doing up the work faithfully.

The practice of some, is occasionally to intermingle other crops with this, as potatoes and beans. I have no experience in this matter; but incline to the opinion that as a general rule, one kind of grain at a time on a given piece of ground is better than more.

A few remarks about harvesting, will close this report. The usual method was, formerly, to top the stalks after the corn was generally glazed, and put them in small stooks between the rows, and when the crop was ripe, proceed to husk it on the hills, or in some cases, to pluck off the ears, carry them to the barn, and then get up a husking-bee, an evening frolic for the youngsters of the neighborhood. I am not quite certain that any better method has yet been discovered, so far as the value of the grain is concerned, than to suffer it to remain on the hills till fully ripe, though it has been asserted by good authority, I suppose, that corn gathered into stooks, will produce more *whiskey* than when harvested by the first method. If *this be a fact, who can doubt the importance of its universal adoption?*

The proper time either to top the stalks or to cut up the crop and put it in stooks, I conceive to be, a matter of no small consequence. We are often told to do it as soon as the kernel is glazed. This I am sure is a mistake. I have done both in several instances, too early, and yet the corn had been glazed for some time. The consequence was, quite a shrinking and looseness on the cob. The stalks may be worth more at that period as fodder, but a diminished value in the grain will be the consideration for it. With the above explanations, and in view of the whole subject, especially with reference to fodder, I have no hesitation in giving my preference to gather in stooks.

Diseases of Animals.

Diseases of Poultry.

The diseases of poultry have seldom received attention in this country, from persons qualified to treat them judiciously. The management of this interesting and useful description of farm stock, both in sickness and health, is usually entrusted to children, or persons who are incapacitated for other business. The consequence is a general ignorance of their peculiar natural habits, as well as their diseases. But within a few years men of intelligence have turned their attention to this subject. This has been the case, particularly, in England, where the natural history and diseases of poultry have been investigated in a scientific manner.

We have been greatly interested with the articles of two correspondents of the English Agricultural Gazette, the one using the signature of "D. S. E." and the other "D." The former has written more frequently on the diseases of poultry, and the latter chiefly on their natural history and habits. In regard to diseases, we propose to give occasionally such abstracts of the remarks of the writer alluded to, as seem calculated to be useful to our readers.

FLUXES, SCOUR AND DIARRHŒA. The first symptoms of these maladies are an unusual looseness. "In the early stages," (says D. S. E.) "this is occasioned by a superabundant discharge of liquid from the kidneys. The first of these, scour, generally precedes the second, diarrhœa, which becoming habitual soon produces great emaciation, and gives rise to the third, fluxes. These last assume two forms, often attendant on roup, and are very fatal and difficult to cure. They are probably occasioned by a secretion of acid from the intestines. The first is characterised by the passing and adherence of a certain irritating calcareous matter, having a very pungent ammoniacal smell, very adhesive and acid, soon producing excoriation, which is succeeded by inflammation extending up into the intestines." In the second form of the disease, there is a constant flow of straw coloured fluid; and the last form is a blood flux.

The causes are believed to be exposure to cold and wet, improper diet, sour food, salted meats, the refuse of vegetables lying about the yard till they putrify, and corrupt the water sometimes standing on the surface of the ground from which the fowls drink; and lastly, a general neglect of the important requisite of cleanliness.

Cure. In the first stages of scours, the writer states that proper shelter, cleanliness and judicious change of diet, will often prove effectual, without medicine. If the disease progresses to the second stage, it is recommended to mix water from a blacksmith's forge with the water provided for fowls to drink; oxide of iron or iron rust, mixed in pellets of barley meal is mentioned as a powerful tonic and astringent. "Part of the yolk of an egg boiled hard, mixed with bruised hempseed, or boiled barley, diluted with wine, (gin is preferable,) is an old French remedy." Another remedy highly recommended, is water in which the rust of iron is infused with an equal portion of new milk.

In the third stage, fluxes, the writer states that he has found the following most effective: two parts castor oil with one part syrup of white poppies, combined. This, he states, acts quickly in checking the disorder. Two tea-spoonfuls is the quantity for a grown fowl. It is added, however, that this remedy when repeated will sometimes produce the contrary effect, when castor oil must be used alone as often as required.

For flux of blood, which is of very rare occurrence, alum, dissolved in the fowls' drinking troughs, is recommended to be used, and rice boiled in milk, with a little starch added.

CONSTIPATION is a disorder the reverse of the above. It is described as follows: "*Symptoms*—straining, very evident to the watchful poultry keeper; and when fatal is mostly owing to neglect or ignorance. *Causes*—deficiency of green diet; feeding too long on dry grain; want of a sufficiency of clean water, free access to which graniverous birds in particular require, owing to the peculiar construction of their intestines, as compared with quadrupeds. *Cure*—a moist laxative diet, boiled instead of dried grain. When the crop requires stimulating, as before stated, one or two teaspoonfuls of gin is preferable to cordial horse-ball, and castor oil to calomel, as often recommended; and soot and fresh butter rolled in barley-meal; chopped suet or fat in roasted potatoes, and also lard mixed, have been advised; and pollen and bran with lard. In very aggravated cases a little sweet oil as a clyster, has been said to be very effective. Rye flour or meal, to which is added a litte honey, is a French remedy."

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

HORTICULTURAL EXPERIMENTS.

I. Budding.

Peaches.—(*a*) Mr. J. J. Thomas' advice, to cut down early in the spring, those trees that were not budded the first year, or whose buds fail, is vastly important. You thus get a good stock for budding.

(*b*) Budded peach trees in windy positions, *should always be braced.* The best mode is to set the brace, (a small stick eighteen inches long for seedlings of the first year,) very slanting, so as to push the tree towards the prevailing wind. Pass your bass around the tree, giving it two or three twists, before you tie to the brace. Thus you will have a kink between the trees and the brace which, with the slant of the stick, will perfectly save your tree from rubbing.

(*c.*) *Earthing budded peaches in autumn.*—I do this habitually, for the following reasons: It preserves the vitality of the bud in an open winter. It saves the important portion of the tree from mice. It saves the tree, in positions where heavy snow banks would be likely to settle, from being crushed and destroyed by the snow. In my sandy soil they never suffer; possibly they might in a heavy one. Remove the earth in the spring before the sap starts.

(*d.*) It may be useful to those who have failed to secure peach stones for planting, during the preceding autumn, to know that *the robber sprouts that always spring up about the roots of a budded tree after it is headed down, will grow.* They are not as thrifty however, as seedlings, certainly not for the first year, beyond which my experience does not extend.

(*e.*) *The removal of trees in the bud.*—*First, in the fall.* I removed 160 trees in the fall of 1846. They were two-year old roots, many of them very large, and were much mutilated in the removal. They were removed the first week in November, the roots being carefully trimmed. Exactly three-fourths of the *buds*, (and every *root*,) lived, some of them making six feet wood the next season.

Secondly, in the Spring.—April 23, 1847. Removed 137 trees, the buds having begun to swell. These trees were all poor roots like the preceding, and were besides, deprived of about one third of their roots, intentionally, (for reasons not necessary to be mentioned here.) Just two-thirds of them lived, and did well. Of those that died, a considerable number were dogged to death by the ants. Here it is well worth remarking that *one-third* of the trees which were set the *sun* side of a high fence, nearly every one grew, while the *two-thirds* that were set in the *shaded* side, exhibited almost all the deaths, whether outright, or from the attack of ants.

2. *Cherries.*—My budding on this tree has taken very rapidly, but no tree has caused me so much trouble in getting off the bass. The buds, after they were apparently fast and looked plump, have been very liable to loosen under the influence of wind and sun, and frequently crushed to death by subsequent rapid growth. My cherries had been sticked almost invariably to save them from breaking by the wind, just above the bud.

Some that broke thus in 1846, I sought to save by putting a slight layer of putty on the wounded top. But it did no good. This last year, (1847,) I applied Mr. J. J. Thomas' mixture of tar and brick dust, apparently with entire success. Let it be put on with great care, so as not to cover the bud.

3. *Peaches on Plums.*—This has caused me more vexation and discouragement than all other labors of the kind put together. Of more than one hundred buds set in 1845, not one now survives. Of the same number set in 1846, but two are alive. *Errors.*—1. Late setting. 2. Careless unbinding. 3. Stock not thrifty. 4. Taking off the buds above the peach so clean that there was nothing to keep the stock alive above the inserted bud. The consequence was that some of my peaches died after they were a foot long, by the drying down of the stock. In the case of peaches and quinces, it will do to take off every bud, but not so with the peach on the plum.

4. *Spring Budding.*—In 1847, June 2d, 3d and 4th, peaches on peaches, and peaches on plums; failed entirely.

b. A pear took on a mountain ash. It grew about four inches, and is now, (Feb. 18th,) alive.

c. Plums on plums. A few (of Bolmar's Washington) took. They are now alive.

Adieu, with all my heart, to spring budding. It will do in the south, but it has nothing to recommend it in Central New-York.

II. Mildew in Gooseberries.

a. I have about forty very old mossy bunches of gooseberries. They have been occasionally manured, and trimmed severely every year. Of the four years they have borne me fruit, two exhibited fine and two mildewed fruit. The two seasons of good fruit seemed to be in consequence of sifting on strong ashes, once when they were in bloom, and once soon after. It was done when the dew was on in the morning.

b. So I had very fine fruit in 1847, on a patch of about three hundred young bushes, under the same treatment. Whether the alkali acts *directly* on the animalculæ that occasions this disease, or *remotely* by giving vigor to the root, I pretend not to determine. The fact, however, is valuable.

III. The White Blackberry.

A correspondent of yours considers this a new thing among the fruits of this fruitful world. I can only say that it grew in my boyhood in Rensselaer county, and that I found it in 1842, in Chautauque county.

White, black and red, are the prevailing colors of the berries of most brambles, and of the external covering of most stone fruits. Meanwhile chemists tell us that iron is the universal pigment of nature, wherewith she beautifies her fruits and flowers. Will not some of our learned vegetable physiologists, who have leisure, taste and ability for such investigations, tell us if they can, whether these different colors in the same species of fruit as the blackberry and currant, are in consequence of the *different conditions* of the oxide of iron in the soil, or of its absence from the soil entirely; or whether it be not the result of the *peculiar powers* of the plant itself, by which it appropriates it to its own peculiar purposes, or rejects it altogether. We may presume, however, that it possesses the latter power, since the same flower often presents various hues, and the same well elaborated garden soil different flowers; while different colors of the same fruit grow side by side in the same soil.

IV. Hawthorns—in this hot climate.

I fully agree with Downing and other writers on the unfitness of the Hawthorn for hedges, in this dry and hot climate. I wish to notice an interesting fact, however, in regard to this thorn. I have a plat of ground of less than half an acre, surrounded by a hawthorn hedge on two sides—the west and the north,—the hedge being untrimmed, and from 14 to 18 ft. high. That on the west side is thick, thrifty and verdant, while that on the north is every way inferior, with nothing in the soil or adjacent cultivation to make this difference. And yet, I think I have lately discovered the reason. The rain storms in this vicinity are, with scarcely an exception, from the east or west. The consequence is, that the hedge on the west side gathers a large amount of rain, that would fall beyond it were the hedge removed, while that on the north side receives merely as much rain as falls upon the surface of the soil at its roots. Hence the thrifty hedge is profusely watered and the other not.

V. Fall planting of Gooseberry cuttings.

In the autumn of 1834, I carried some gooseberry cuttings 120 miles in hot, dry weather. I planted them, without much care, in good gravely soil, in my garden. This was about September 28th. In the spring of 1835, before vegetation, even in the gooseberry, could start, I had occasion to remove a few of these cuttings. In doing this, they presented white, thread-like rootlets, some of them six inches long, which must have been emitted the fall before. These cuttings made more wood during that season, three to one, than any that I ever set in the spring. The reason never occurred to me until lately. If I am wrong, will not some of your learned correspondents correct me.

I reason thus. The first impression of the declining heat of autumn was the more thoroughly to ripen the wood of the cutting at the top. Meanwhile the accumulated heat of summer lingered deep in the soil long after the air above became cool with the chills of autumn. Through the influence of this bottom heat, the process of granulation, at the bottom of the cutting went on, and the rootlets were emitted. In the spring, the plants started with considerable of the vigor of plants already rooted. On the other hand, cuttings set in the spring, feel the drying influence of the sun at the top, while the bottoms are immersed in cold earth, where the work of granulation and the emission of roots cannot go on. Those acquainted with the chemistry of heat, will readily perceive that the downward progress of heat in the spring is necessarily slow. Hence cuttings set at that season are in an unphilosophical condition, heat at the top and a chill at the bottom, when conditions exactly the reverse are needed for the speedy and certain growth of a cutting. Does not this experiment, and these principles apply to all cuttings; and have we not yet much to learn on this subject?

VI. Fruit trees in Clusters.

I have several plum trees growing in clusters of from three to seven stems each, growing from a common root. They are well trimmed up, and spread outward so as to form a round, open combined head. They have the advantage of being low, so that the fruit is readily gathered, while the tops are less exposed to the wind, both in blooms and in fruit. The trees in question are the Bleecker—(the Lombard plum of Downing,) and have been regularly derived from the original as sprouts. This form of tree has the single disadvantage of being less readily cultivated by the plow than straight single standards.

VII. Cherry Trees split by the Sun.

I have two cherry trees standing in a very hot position, which are badly split by the sun. Now I think that a board, a foot or more wide, and set in the ground close to the tree, with its top fastened to the tree by a single nail, would remedy this evil. This remedy, I think, would be better than straw bound round the tree which, besides presenting an unsightly object, affords a shelter for insects. In the case of very large trees, standing in hot positions, two boards nailed together at the edges so as to form an angle might be used.

VIII. Mixture of Beets and Carrots in seeding.

In the spring of 1845, I planted 3 or 4 pecks of the ordinary turnep rooted beets, of good quality, for seed. Close to them and separated only by the space between the rows, I planted about as many yellow carrots, also for seed. They seeded well. I sowed this seed in the spring of 1846. Many of my carrots were red and many of my beets yellow. The seed was ruined. Now, although these two plants are of the same class and order in the Linnean system, and probably of very nearly the same vegetable principles, yet considering the difference of herbage and inflorescence, who would have suspected their mixing? *Query.*—If we assume that red was the original color of the beet, may we not suppose that its varieties of other colors, were originated by such crosses as this? E. C. G. *Utica, March,* 15, 1848.

"Insects injurious to the Grape-Vine."

(*Cultivator for* 1848, *page* 151.)

By referring to the New-York Farmer for 1831, to the Genesee Farmer for 1832, page 133, and to Silliman's Journal for April, 1834, page 113, accounts of this troublesome visitor may be found. Nearly the whole colony on my vines, was extirpated by passing them between the thumb and finger; and by destroying the "minute worm or slug," which I found to be the larva of the same insect. Under this treatment, requiring no great amount of labor, we had grapes in abundance.

On my first discovering this depredator, a young student in Entomology, gave it the PROVISIONAL NAME of *Chrysomela vitivora,* from its feeding on the vine, but it appears to be the *Haltica chalybea,* (steel colored) of Illiger,—Haltica having been separated from the former extensive genus. D. THOMAS. *Greatfield,* 5 mo. 6, 1848.

"Destruction of fruit buds by frost."

(*Cultivator for* 1848, *page* 151.)

The blossom buds of the peach are so admirably formed—so dry, that like a grain of Indian corn, or a seed of the cucumber, they endure without injury any degree of cold to which this climate is subject. Their safety depends however, on their continuing *dry,*—for as soon as the sap flows in and *swells* them, they are liable to perish if the mercury in the thermometer, descends much below zero.

After the leaves drop in autumn, these buds become very sensitive in mild weather, either at that season or in winter. Sometimes indeed, though very rarely, the blossom opens in the fall—to perish of course. The danger appears to increase with the amount of development; and the same remarks apply to the fruit buds of the apricot.

Among the mountains of Pennsylvania, in a climate much more rigorous than ours, where the cold throughout the whole winter is steady, the peach tree is very productive: and some of *our* most severe seasons have been succeeded by plentiful crops of this fruit; but when the buds *start* in autumn, our hopes of plenty are founded entirely on the mildness of the weather that is to follow, for ten degrees below zero, have been sufficient to destroy them. D. T. 5 mo. 8, 1848.

Popular Errors.

EDIT. CULTIVATOR—The article quoted in your last number, from the Gardener's Chronicle, stating that "Balsam seed 3 or 4 years old, *saved from double varieties,* is pretty sure to produce double flowers, whereas one year old seed is almost certain to produce single blossoms," is sheer nonsense of the witchcraft class, and is on a par with the stale English notions that very old cucumber and melon seeds will run less to vines and produce more abundant crops than new seed, and with the silly idea that by placing melon seeds in a pantaloons' pocket for some time previous to planting, that the warmth will improve their quality or accelerate the maturity of the crop. All these and the visionary tales about planting seeds, and rearing crops at certain stages of the moon, which some of our least favored ancestors brought over with them from Europe, have long since been exploded by intelligent American minds. They nevertheless exist in full force among the benighted and uneducated population of many countries of Europe. The "Seventeen years Locust" will doubtless in time prove to be one of the same category. It is discreditable to the mind of man to yield a blind credence to any statement as to a result or effect, unless a cause is assigned that will afford conclusive grounds for our mental conviction. Flushing, March 6, 1848. Wm. R. Prince.

Albany & Rensselaer Horticultural Society.

The annual meeting of this society was held in Albany on the 6th of May. The following gentlemen were elected officers for the ensuing year.

President.—JOEL RATHBONE, of Bethlehem.

Vice Presidents.—D. Thomas Vail, Troy; Dr. Herman Wendell, Albany; Ezra P. Prentice, Bethlehem; V. P. Duow, Greenbush.

Secretary.—B. P. Johnson, Albany.

Treasurer.—A. E. Brown, Albany.

Managers.—Amos Briggs, Schaghticoke; Stephen E. Warren, Troy; J. M Lovett, Albany; Wm. Buswell, Troy; J. McD McIntyre, Albany; Jas. Henry, Watervliet; Wm. Newcomb, Pittstown; James Wilson, Albany; A. Osborn, Watervliet.

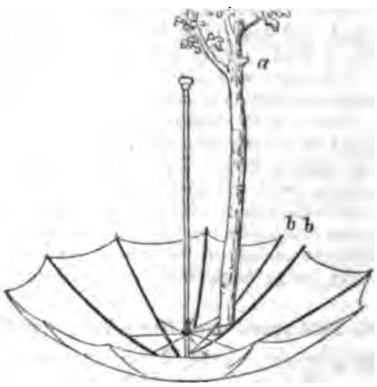
Exhibitions of fruits and flowers, will be held by this society as follows: At Albany, June 14th; at Troy, July 12th; at Albany, September —, annual show; at Albany, second Wednesday of February, 1847.

The Curculio.

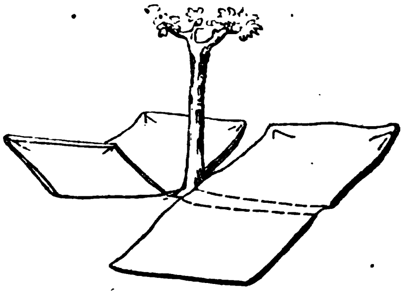
As it has been fully decided by fruit growers that there is no "royal road" to the destruction of the curculio, it becomes very desirable that the *common road* should be made as smooth as possible. Under ordinary circumstances, fine crops of plums, apricots and nectarines, cannot be obtained without protection from this insect, and it often happens that other fruit suffers from its attacks.

After trying nearly all the numerous remedies which have been recommended, we have come to the conclusion that for *general* application, the best mode is a combination of two—first, destroy all that is possible by jarring them down on white muslin, and secondly, suffer pigs and geese to pick up and devour all the injured fruit which falls. Where pigs and geese cannot be admitted, a more diligent application of the jarring will be effectual, but otherwise, these animals will greatly lessen the labor.

It has been urged, as a serious objection to the mode of jarring down on muslin, that the labor often amounts to more than the value of the fruit. Where this remedy is but imperfectly applied the time required for the extermination of the insect is prolonged, and the crop, besides, may be nearly destroyed. Hence a vigorous attack will be found altogether the most economical. To facilitate the work, we have adopted two different contrivances, both of which will be found essential advantages, and great improvements on the old mode of merely spreading white sheets under the trees. The first, is a large umbrella, (Fig. 45), with a white covering, with an opening or slit between, to stiff arms, *b. b*, to receive the trunk of the tree. The arms, or expanding radii, should be nearly straight when the umbrella is spread, and not curved as is usually the case. If they are made of bamboo, an umbrella six feet in diameter, will not cost more than two dollars and may be procured to order at any factory. In using this implement, it is spread, placed in an inverted position and passed under the tree. The blow of a mallet is given on the short stub of a limb, *a*, which will jar all or nearly all the curculios from the branches; the umbrella is then partly folded and shaken at the same moment, by which all the insects are thrown through an opening a few inches in diameter at the centre, made for this purpose, into a pail of hot water already provided, or into a shallow vessel of oil of turpentine, and thus their destruction is as speedy as complete. A hundred trees may thus be cleared in a few minutes, and if attended to twice a day, will certainly save the crop.



Inverted umbrella for catching Curculios—Fig. 45



Muslin on light frames, for catching Curculios—Fig 46.

Where the trees are very large, or where an umbrella cannot be conveniently procured, square frames, made as light as possible and covered with white muslin, as represented by Fig. 46, will answer a good purpose, but will not be quite so convenient nor expeditious as the former mode. Each piece of muslin is attached to two square frames, so that it may be folded together, like a book. This folding will throw the insects together, and then lifting the frame and inclining it over a vessel of hot water or turpentine, they are easily jarred into it.

The advantage of a white surface is the operator sees at once where the insects are, and whether he is accomplishing his work.

Disease of Fruit Trees.

I see by your periodical, that the pear tree blight is attributed to frost. I had a pear tree in 1846, attacked by a species of blight, (whether the same you have at the north, I cannot say) but this was a species of fungus; the bark became covered with small brown spots, from which proceeded what I call its roots, like cobwebs, which adhered closely to and completely covered the bark. Last summer, which was moist and warm, it spread to some apple trees, (in fact over the apples themselves)—plum and mimosa trees and rose bushes, and I have no doubt they will all die this summer, as the pear limbs attacked in 1846, all died in 1847, the bark cracking clean to the wood in young twigs.

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* In general seeds saved from double varieties will produce double flowers whether it be new or old.

If you know of any cure, you would confer an obligation on me, and I doubt not many others, by publishing it. I should observe that peach trees in the immediate vicinity, entirely escaped.

North Vicksburgh, Miss. R. Y. Rogers.

The blight described in the above communication, does not correspond to either the frost blight, or insect blight which are known here.

Budding once more.

See Vol. 4, p. 239.

Your correspondent R. T., is right as respects the mode of budding, but appears not to have *quite* discovered the *best time* to perform the operation.

In March, 1846, I received by mail from Rochester, N. Y., through the kindness of Messrs. Ellwanger & Barry, a slip of the "Northern Spy" apple, which when received was quite dry, and showed but a very little indication of life. I kept the scion in moist earth until the second week in April, when I put the buds, (10 of them,) on some young seedling trees, four of which grew freely, and made during that summer, about 10 feet of wood, averaging nearly three feet each tree. I used last spring a part of the buds of the growth of 1846, and have now, from that small beginning, about 50 trees of that noted variety of apple.

In August, 1846, I budded several cherry trees, which proved almost an entire failure; last April I re-budded 50 of the same trees, with buds taken from the scions of the Black Tartarian cherry, cut the previous February, 49 of them grew, some of which made the past season upwards of three feet of well ripened wood. I advise R. T. to try again as soon as the bark separates freely from the wood next spring, using buds cut from scions next month, and whether he succeeds or fails, communicate the result "for the Cultivator."

I know not how it may prove in New-England, but am satisfied that in Illinois, the months of April and May are the best for budding.

For the benefit of some of your western subscribers who have abandoned the cultivation of the Quince, under the impression that our soil or climate is not congenial to its growth, I remark that the quince may be inoculated on either of the varieties of our native thorn, and the bud takes freely. I have raised the large orange quince on the thorn the second year after the insertion of the bud, which was taken from a quince tree that had never shown any signs of fruit, although upwards of fourteen years old. The quince on thorn stocks produces fruit every year, while those on their natural roots do not bear any. Several quince-bearing thorn bushes may be seen in Mr. Slack's garden, at Lewistown. J. D. *Fulton County, Ill., Jan.* 1848.

Strawberry Runners

These should be treated as weeds, and kept hoed from among the regular rows of strawberry plants. They have precisely the same effect upon the crop as the same quantity of weeds, and cannot fail to lessen the amount, as well as to diminish the quality. A writer in the Gardeners' Chronicle remarks, "So convinced am I of the propriety of cultivating this fruit in separate and distinct plants, and of cutting off the runners, that I have this season taken out a plant between each of my plantations, thus making the distance between each plant *four feet by three*.

Productive Apple-Tree.

Browne, in his trees of America, says there is an apple-tree at Romney in Virginia, which, according to Dr. Mease, grew spontaneously from seed, is estimated to be fifty years old, and has obtained a height of 45 feet, with a trunk more than a yard in diameter. In 1835 it produced 180 bushels of large fruit, besides four or five bushels left under the tree as damaged, and several bushels taken by visitors during the course of the season—so that the whole amount, in the opinion of Dr. Mease, must have been nearly 200 bushels.

The greatest quantity of fruit borne on a single tree in England, in one year, grew in Littlefield, Sussex, and produced 74 bushels of fruit—the total weight of the crop being nearly two tons.

Repeated instances have occurred in Western New-York, of trees of the Rhode-Island greening, with little or no cultivation, yielding single crops of more than forty bushels.

Bassano Beet

We observe that A. J. Downing, in a late number of his Magazine, describes this fine early beet as "oval" or "long turnip-rooted." We have cultivated it for several years, the seeds being obtained from different sources, and with us it has had invariably a *flat* root, like that of the flattest turnips, the horizontal diameter being usually twice the distance from the crown to the tap root. It has proved very early, sweet and delicate, and always remarkably productive,—where thickly planted, the roots literally touched each other, without a diminutive growth. Which is the genuine variety?

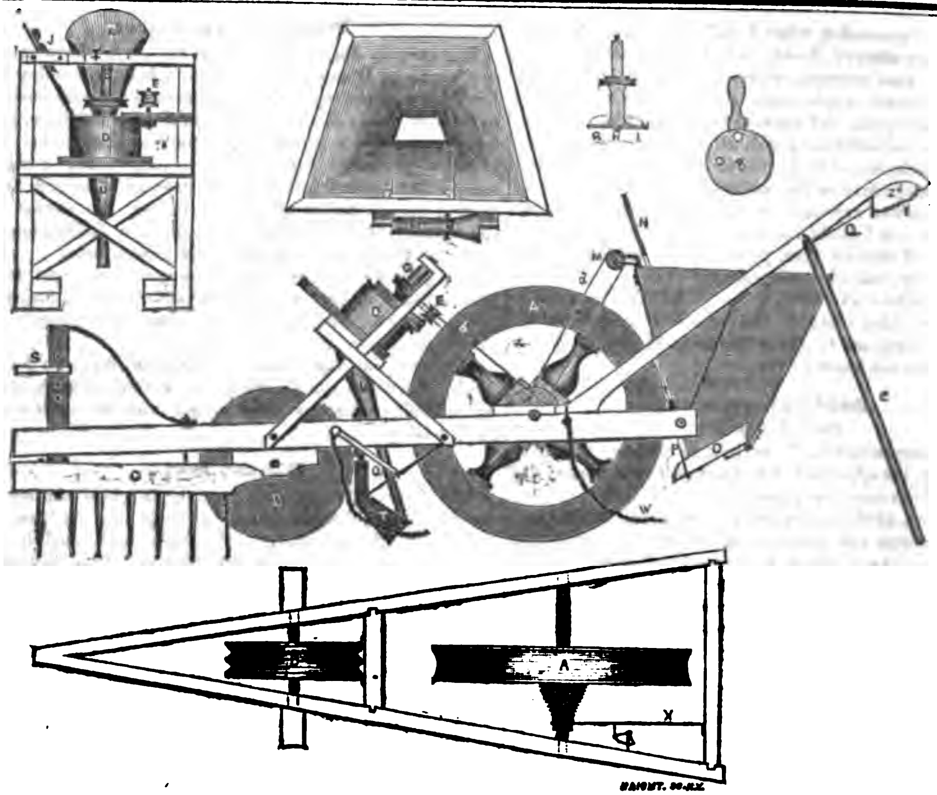
Fruit Stealing.

Some of our readers will doubtless remember the remedy published some time since against fruit stealing. James Matthews, Esq. of Coshocton, Ohio, thus speaks of this remedy in a letter to the Ohio Cultivator:—"We have found the article published in your last number, the best remedy yet known here for fruit-stealers and garden robbers. The *tartar emetic* works finely! A good dose will lay a fellow out limber for a while, as the sad experience of some here amply proves. It also clears out the stomach, prevents chills and fever, and creates a distate which very much diminishes thieving propensities."

"An' sure, and ye don't call it stealing, to get over and take a little fruit, do ye? Yes, we do, (says one of the Maine Farmer,) and the meanest kind of stealing, too. You wouldn't walk into that man's house and take his money from his drawer, nor his bread from his table; and yet very likely that bread and that money have not cost their owner half so much care, half so much labor, and are not half so much prized and valued as his fruit."

The Curculio repelled.—A. J. Downing, in the Horticulturist, states that on two nectarine trees, (a fruit eminently liable to destruction by this insect,) standing near a stable yard, not a single puncture could be discovered, while others a few rods distant did not escape. This effect was attributable to the offensive fumes of the manure repelling the insect. The same journal contains a communication stating that the writer wishing to stimulate some old plum trees, left round them for a fortnight, uncovered, a heavy coating of fresh horse-manure, during the period of the swelling of the fruit. These trees bore fine crops; all others were stung, and dropt all their fruit.

Lamoille Co. Ag. Society, Vt.—Fair at Hyde Park, Sept. 20th. Officers for the present year, Ariel Hunton, President; Samuel Merriam, Noah Robinson, Vice-Presidents; L. H. Noyes, Treasurer; C. S. Noyes, of Hyde-Park, Secretary.



DESCRIPTION OF DRILL BARROW,

For planting Seeds, and applying Manures, such as Poudrette, Bone-dust, Ashes, Plaster, Marl, &c., at the same time.

A. *Main Wheel,* to propel the machinery and roll in the seed; made concave in order to press the earth to the sides of the seeds as well as upon the top of them. It leaves a slight convex ridge upon, and a little furrow on each side of the seed, so that rain may settle at the sides rather than immediately upon the seeds.

B. *Regulating Wheel,* to keep the Coulter at an uniform depth—made fluted to help pulverize the earth.

C. *Harrow,* to throw aside small obstructions, as also to fine the ground.

D. *Seed Box,* which may be drawn out for the purpose of emptying it.

E. *Tightening Pulley,* to accommodate the band to each groove on the gearing wheel F, and on the head of the elevator, as may be necessary to give the requisite speed to the elevator or dropper, secured by a thumb screw underneath. This screw must be loosened to shift the elevators.

F. *Gearing Wheel,* with grooves of different diameters, by which greater or less speed is given to the dropper; of course, putting in the seeds at greater or less distances apart.

G. H. I. *Elevators* or *Droppers,* of different sized holes, for corn, beets and turneps.

J. *Clearer,* of whalebone, secured by a wedge in the frame of the elevator, just so as to spring into each hole as it passes the guide tube U.

K. *Leader,* by which the seed box may be supplied without stopping the machine.

L. *Manure Box,* or *Hopper.*

M. *Rack Wheel,* connected by a band with gearing wheel F, and giving motion to shoe O, by connecting rod P; this may be raised or lowered by slides and thumb screws under it, on the hopper.

N. *Slide Guage,* to regulate the quantity of manure to be delivered.

O. *Shoe* to hopper.

P. *Connecting Rod,* conveying motion to shoe O, from rack wheel M.

Q. *Gearing Rod,* which upon being drawn, by pressure of the left hand upon chain Y, throws the gearing free from main wheel A.

R. *Pall,* to prevent a reverse motion to the machinery; also serves to clean the surface of main wheel.

S. *Clevis.*

T. *Coulter,* which by nuts may be set deeper or more shallow, according to the desired depth for planting different seeds.

U. *Guide Tube,* conveying seeds to the furrows.

V. *Chain for covering seeds,* attached to knobs on the outside frame, so as to draw in a curved form after the coulter, and before the main wheel.

W. *Chain* covering the manure upon the same principle as V.

X. *Spring,* acting upon the gearing wheel to keep it in its place when liberated.

Y. *Hand Chain,* by which to move gearing wheel.

Z. *Hook,* to retain hand chain, and keep the machinery out of gear.

a. *Leather Strap,* to confine guide tube.

b. *Band* to elevator or dropper.

d. *Band* to manure dropper.

e. *Legs,* resting on hooks when the Barrow is moving, and extended when standing still, to keep it from falling on its side.

The prevailing practice in that part of New-Jersey to which I removed in 1833, was, to plant corn in hills about six feet apart each way, manuring only in the hills. A few experiments convinced me that spreading a larger quantity of long manure and plowing it in was the better method; yet still I found it needful to add a little fine manure to each hill at the time of planting, in order to give the plant an early and vigorous start. This last process, however, was attended with considerable labor at a busy season, as I found it required full five days, man's work, to haul and distribute the manure, drop and cover an acre, if done properly.

I tried drilling corn in rows, but then to scatter the manure *nicely* in the drills, was a tedious business which I could with difficulty get common farm hands to do. Therefore, I set about contriving a *Manure Barrow* and Seed Dropper combined, and put in my principal crop with it in 1838, and continued to do so for the seven following seasons that I remained on that farm. My first attempts were not quite satisfactory, but I studied to obviate the difficulties as they occurred and to make improvements; the machine in its present state is the result thus far, and I shall be glad to see it further improved.

The accompanying drawing was made several years ago; since then the pulley M has been made larger, and a tightening pulley added to band d, both of which are improvements.

I have used only riddled manures in the machine, such as poudrette, lime, ashes, charcoal and bone dust. In my last planting of corn in 1845, I put eight bushels of bone dust, mixed with twice the quantity of charcoal dust to the acre, it being the first planting upon land recently underdrained. The yield was a good one.

With this machine and a steady going mule, a man has put in five acres per day; that is, plant, cover and manure it in drills. My practice was to plant twice as many kernels as I wished to stand, and where birds, moles and insects did not thin out sufficiently, it was done with a common hoe, cutting through the rows, leaving the strongest plants to average a distance of about eight inches apart. The drills being 4½ to 5 feet apart.

Once plowing the corn only, and then as soon as the plants were fairly up, so as to be plainly seen in the rows, going as near as possible and turning the furrows from them, afterwards keeping the ground loose and clean by the cultivator and harrow, I found to be the better practice. I am satisfied that hilling up corn is useless, and destroying the root by the plow worse than useless, both for the corn and the stalks.

The kind of corn of all the various sorts that I tried which in that section produced the greatest yield, is rather a large growing stalk, producing ears of fourteen to twenty rows mostly, red cob, the kernel a reddish yellow, or flesh color, something of a gourd seed or horse tooth shape, and a little indented on the top.

ROBT. WHITE, JR

New-York, 4 *mo.*, 1848.

THE FARMER'S NOTE BOOK.

The Norman Horse.

EDITORS OF CULTIVATOR—In the course of my remarks on breeding horses, recently published in the Cultivator, I have more than once intimated my intention to notice the Normans. This design would have been executed earlier had I been able to command my time. I have even now to regret that other calls press upon me so closely that I am compelled to give you but a hasty sketch.

The Norman horses now most used in France, are a cross of the old French or Norman draught horse with the Andalusian, or Spanish barb. The original breed was too clumsy and slow. The cross with the Andalusian has rendered them more shapely and active. I have examined the improved breed with a good deal of scrutiny. During my visit to France in 1846, I rode many hundred miles behind them, and saw many stables filled with them. The postmen and stage proprietors use them exclusively. I found them in daily service from four to twenty-four years old. Some had been driven fifteen or sixteen years. I found no lame or sickly horses in their stables—all appeared fat and hardy. They are driven before the mail coaches over routes of many hundred miles in extent, at the rate of eight miles per hour including stops; and I have many times seen one or more horses in a team trotting squarely and handsomely when the coach was moving at the rate of thirteen or fourteen miles per hour. They are of very uniform size and appearance—generally about fifteen hands or fifteen hands and an inch high, and weighing 1100 lbs.

The Norman horse lately purchased by Mr. Howland, of Union Springs, Cayuga County, is a very correct representative of the breed as it now appears in France. His sire "Diligence," is a better horse than any one I saw in France; and I have no doubt the stock of Mr. Howland's horse will prove a valuable acquisition to this section of the State. On good common mares of large size, he will get decidedly the best farm and draught horses that we can raise. I think the Norman horses and their crosses are better adapted to stage coaches and peddler's wagons also, and all places where quick and heavy draught is required, than any breed of horses of my acquaintance. I have no doubt that a pair of them, with a ton or more behind them, will perform a greater journey in a day or a week, than any other horses that can be produced.

Again, they are so hardy that there is but little trouble or risk in raising them. They mature so early too, that they may be sold at three and four years old for as much as they will bring when eight or nine. In short I consider them a very useful and valuable stock of horses. Respectfully, &c., J. B. B.

Syracuse, April 13, 1848.

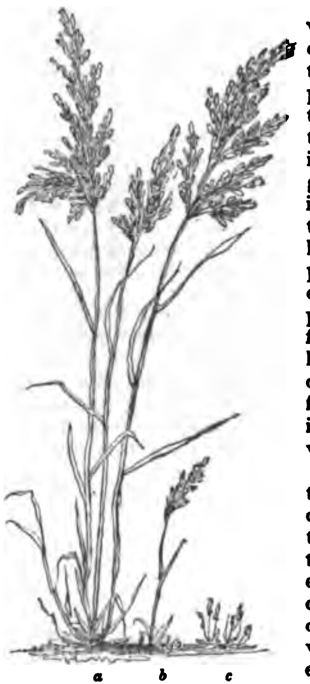
P. S. In my last article on breeding horses, your compositor has made me say that I have never known a successful cross of a *Morgan* horse on a highly bred mare. I wrote, or intended to write, that I have never known a successful cross of a *Norman* horse on a highly bred mare.

Large Corn Crops in Indiana.

I noticed in the January number of the Cultivator, 1848, page 29, an inquiry respecting the method of raising large crops of corn in the west. In 1843 I plowed up a piece of grass-land which had been pastured two or three years. Before plowing I spread over one-third of the ground about ten cords of common barn-yard manure per acre; turned the sod as even as I could four inches deep. Planted Northern Yellow corn from Western New-York. Harrowed each way twice, and cut the weeds thrice—no hills made. Yield, 80 bushels per acre. Next season, 1844, spread on about seven cords of manure per acre on a little more than half the field, beginning on the same side as before, plowed once—laid off each way with a small plow—planted four feet apart each way, with *Baden*, and other corn common to this latitude, thirty eight degrees forty minutes. Harrowed and hoed as above. Average crop, 133 1-3d bushels per acre. The manured part supposed to be one-sixth best. THURSTON WOOD.

Madison, Jefferson Co., Ia., March 10, 1848.

Wheat and Chess.



Chess plant—Bromus secalinus.

Our readers are aware that a difference of opinion exists on the subject of the supposed change of wheat to chess. The practice of many farmers is in a great degree guided by their opinions; and it is important to know whether he who diligently and perseveringly endeavors to eradicate every plant of chess from his fields, may reasonably hope for ultimate success; or whether careful or careless practice is to be alike rewarded with success or failure.

Without intending to offer any thing of a controversial character, we wish to call the attention of farmers to some points in the character and habits of the chess plant, which we believe will explain some results otherwise apparently unaccountable; and assist in reaching the truth much better than the statement of many superficial observations, of what may appear at first striking cases of transmutation.

One of the most interesting and important points of character in the chess plant, is the difference in size and luxuriance under different circumstances. Under the thick shade of vegetable growth, plants have been observed scarcely two inches high, perfecting their seed, and impregnating with the seed, wholly unnoticed, the land on which they grew. This has been noticed in meadows even two or three years after seeding down with grass. But when this obstruction to its growth is removed, the young roots will send up several shoots, to three or four feet in height, and in some cases yield an increase of two or three thousand fold. The accompanying figure represents plants of chess, growing from seed precisely alike, but under favorable and adverse circumstances afterwards. *a* is a plant growing in good soil, without interference or obstruction; *b*, a plant partially shaded; *c*, a plant of the smallest size, under a very dense growth of wheat, or in a meadow. These figures are drawn from actual observation, and the relative sizes are correctly given.

Another character is, the small size and hardiness of the seeds of chess. Being much smaller than wheat, they often escape notice, and are sown and unconsciously spread; or escaping the teeth of cattle are distributed with their manure; or may be even spread by birds. The time they will remain in the ground, without vegetating, is unknown. But as pig-weed, fox-tail and other weeds, have been noticed to spring up in dense growth, on plowing meadows and pastures, which for a long series of years were thickly matted with turf; it is reasonable to suppose that the seeds of chess also may remain many years in the soil, ready to spring up and grow, when "clean seed" is sown on new or supposed clean ground.

Hence it follows, in consequence of the preceding facts, that when wheat is good, and has a fine thick growth, the plants of chess are small and entirely escape notice; the scythe does not perhaps touch them, although they ripen and spread their seed. But when the wheat is thinned or destroyed by winter; or when cattle get in and eat off the crop, or when it is destroyed by any other means, the obstruction to the growth of the chess is removed, and young plants, instead of remaining as shown by *c* in the figure, of diminutive size, it shoots up and spreads its heads far and wide, and produces a conspicuous and abundant crop. The wheat has disappeared, and chess has taken its place; hence the conclusion is very natural that the former has changed to the latter.

But as every good farmer is careful to destroy pigweed and fox-tail, and avoid spreading the seeds, the same care should be extended to the exclusion of chess. Instances are by no means wanting where such care, persevered in, has entirely eradicated the plant; and when wheat on such farms has been destroyed by winter, no chess has taken its place.

Agricultural products of the U. States and France.

A writer in the English *Agricultural Gazette* makes an interesting comparison of the products of the United States compared with those of France. The population of the United States is set down at 20,000,000 and that of France at 35,000,000. The proportion of the agricultural population in America is given as 80. 4 per cent.; commercial, 2. 5; and manufacturing 17. 1. The writer observes that the agricultural production of the United States, compared with its inhabitants, is enormous, viz:—

	Horned cattle.	Sheep.	Horses & Mules	Pigs.
United States,	14.971,583	19,311.374	4,335,609	26.301,293
France,	9.936.538	32,151,430	3,192,337	4,940,721

He contrasts the grain crops of the two countries, showing the comparative amounts produced of each kind, in hectolitres, as follows:

	Wheat.	Barley.	Rye.	Oats.	In. Corn	B'ckwheat
United States,	30 millions.	1½ ml's	6 ml's.	44 ml's.	135 mls.	2½ ml's.
France,	69 "	16	27	48	7	8

"The United States," (says the writer,) "produce annually 70,000 tons of wool, 600 tons of hops, 300 tons of beeswax, 10,000,000 tons of hay, 95,000 tons of hemp and flax, 100,000 tons of tobacco, 40,000 tons of rice, 395,000 tons of cotton, 60,000 lbs. of cocoons of silkworms, 77,000 tons of sugar, and 5,000 hectolitres of wine. The produce of the farm-yard, or cow-house, is estimated at 7,000,000*l.* sterling—($35,000,000); that of the orchards, 1,560,000*l.*; forests, 2,720,000*l.* The total amount of agricultural produce, amounts yearly to the enormous sum of 138,730,160*l.* sterling—($693,650,800.) The manufactures of the United States, though yet in their infancy, are rapidly increasing, and the writer puts down the amount of capital embarked in manufactories of various kinds, at 56,757,912*l.* sterling. Considered in all respects, therefore, he concludes—"America may be classed next to Great Britain, as the second agricultural and commercial country in the world."

Long and Short Eggs.

"D.", a correspondent of the English *Agricultural Gazette* shows that the old notion of "long eggs producing cocks," is unfounded. His first argument is, that "to every hen belongs an individual peculiarity in the size, form and color of the egg she lays, which never changes during her whole life-time, so long as she remains in health, and which is, as well known to those who are in the habit of taking her produce, as the hand writing of their nearest acquaintance. Some hens lay smooth, cream-colored eggs, others rough, chalky granulated ones: there is the buff, the snow-white, the spherical, the oval, the pear-shaped, and the emphatically egg-shaped egg. * * * * Now I assert that the hen who lays one round egg, will continue to lay all her eggs round; and the hen that lays one oblong, will lay all oblong. Consequently one hen would be the unceasing mother of cocks, another must remain the perpetual producer of pullets, which is absurd. * * * An old lady, whose fowls were all white, gave me a small globular egg, as round as a ball; it was added to a clutch of speckled Dorkings. The result was the due number of Dorkings, *and one white cockerel*. By the rule alluded to, it should of course, have been a pullet."

"Another supposed test is the position of the air-bag at the blunt end of the egg. We are told that 'if it be a little one side, it will produce a hen; if this vacuity be exactly in the centre, it will produce a cock.' But take a basket of eggs; examine them as directed, by holding them between your eye and a candle, and you will find very few indeed in which you can say the air-bubble is exactly concentrical with the axis of the egg. A cock ought thus to be like Ovid's black swan, a rare bird. But in many broods, the cockerels bear a proportion of at least one-third; especially in those hatched during winter or in unfavorable seasons; the immediate cause being, doubtless, that the eggs producing the robuster sex, possess a stronger vitality; the more remote cause being the same wise law of Providence, through which in the human race, more males are born into the world than females, to meet the wear and tear of labor and accident."

Farming on Long Island.

Perhaps you would like to hear something about this place—situated on the extreme east end of Long Island (North Branch.) Although generally considered as almost out of the world, and almost unknown, we think it is "one of the places," for farming operations, if nothing else. It probably, contains between five and six thousand acres, and except a few hills and rocks on the Sound side, it is as level as a western prairie. The soil is excellent, and land is worth $100 per acre. We are favored in having unusual facilities for fertilizing our soil. Great quantities, probably thousands of loads, of seaweed are annually collected, and add greatly to the products of the barn-yard and hog-pen. Between three and four millions of *moss-bonkers*, [fish,] also, are generally taken yearly in our harbor, the greater part of which are spread on our corn and potatoe fields, or buried in heaps to be spread on wheat and turneps. The farms here are small, averaging perhaps 30 or 40 acres, but I think you would be surprised to see the large quantities of produce sent off yearly. The principal are wheat, corn, potatoes and turneps.

I venture to say that there is not a village in the state, where there is a more equal distribution of property than here. There is scarcely one but what possesses a competency. We feel the want of nothing so much as timber, though some own woods in the adjoining country.

Our fencing stuff is brought from Connecticut and costs from 8 to 12 dollars a hundred—good three-rail fence costs 60 or 80 cents per rod, exclusive of labor. Every farmer has this tax on his income. Now can you tell us of something cheaper to fence our lands? I have thought of hedges, but the objections made are that they take up too much land, and that it is too much trouble to start them. I should like to see something more explicit in regard to their cultivation—to what extent they impoverish the land—how long they must be protected from cattle, &c.? C. N. B. *Orient, L. I., April*, 1848.

Protection for Bees.

Bees in their undomesticated state, have sufficient protection against the frost of winter in the thick sides of the trees which they inhabit. A like protection was afforded by the straw hives formerly used; but the thin boards of which hives are now generally made, leave the bees so much exposed, that multitudes in almost every hive perish with cold, and not a few whole swarms. Burying them in the ground, and carrying them into cellars, have been practiced with good success; but these methods are inconvenient and not often adopted.

A method which I have for several years adopted, I have found very convenient and successful. My bee house is so broad as to admit two rows of hives, one fronting one way and the other the opposite. I place my hives eight or ten inches apart, and fill the spaces between and about them with straw, leaving the mouths of the hives unobstructed. I leave the straw about the hives late in the spring, till the old bees and the young brood will be secure from injury from late frosts. I have generally used pea straw lest mice should enter it and molest the bees; but I have used clean threshed wheat straw, and have never suffered any injury from it. E. D. ANDREWS.

To Farmers.

Why is it, that the effort and enterprize of the commercial and mechanical part of our population is crowned with so much success, while, with a few exceptions, compared with the great mass, the efforts of our farmers but just enable them to live? Is it not for want of the proper direction of their energies to the object sought? We hear daily of merchant princes, of manufacturers who accumulate immense wealth, of bankers who control large amounts of our circulating medium, and these several classes, with our professional men, are those who govern the affairs and direct the legislation of our country.

Why is it, that sixty-five thousand professional, and one hundred and twenty thousand commercial men, and eight hundred thousand manufacturers and mechanics, making in the aggregate less than one million, exert so much more influence than the four millions of our agricultural population? And why are we told that the farmers constitute so small a proportion of our several legislatures, when their interests are so much greater than that of all other classes united?

The numerical and physical power in this country is largely in favor of agriculturists, and were their efforts properly directed, there is no reason why the influence they exercise should not be in proportion to this power. The number of farmers to be found in our legislatures at the present time may possibly be greater than formerly. Yet it is to be feared, that they are not always the best men who could have been selected; but that in some instances they are those who by their ambition rather than their merits, have gained these places of distinction, and who, if we may form an opinion by the result of their legislation, are controled by others, and in many cases, like some who fill our county and town offices, are men who seek after office, rather than those who are sought after. But my object is not to write a political lecture, but to inquire into the reason why so great disparity exists in the intellectual powers of the different classes of our population. Is it not for want of a system of education adapted to their various occupations. It may be said that the children of almost our entire population enjoy in our common schools equal opportunities for education with each other. Is there not wanting, however, in all of them an appropriateness to some of these occupations, and more particularly to those who seek an agricultural employment? True, in our schools they are taught that "two and two make four:" and that seven per cent added to the principal once in ninety days accumulates rapidly. But is not this suited to the merchant and banker rather than the farmer? Does not this instruction give the commercial man a starting point, which lead him to make laws to promote his own interests, permitting him to purchase State Stocks paying six per cent, and on this basis giving him the privilege of issuing a representative of money upon which he may receive seven per cent once in ninety days on the same property, while the farmer, should he be so prospered as to accummulate a little money to loan, is prohibited by our laws from taking over seven per cent. Should not the farmer's boy be taught that where "one blade of grass now grows two may be made to grow," and should not he be instructed how and in what way this may be accomplished? Thus giving him a starting point, which would be as certain in its ultimate favorable results as in the case just supposed. When will our farmers awake to see the importance of so educating their children to the business of farming, that a farmer's son shall be as well informed in what relates to his occupation, as the commercial and professional man now is in what concerns his? Has not the time arrived when in all our common and higher schools of education and colleges, the science of agriculture should be taught so that they may enjoy equal opportunities for education, adapted to their employment, with the most favored class of our community, and that the education acquired in these schools should not be so exclusively confined to what concerns the professional man alone? Let this subject be constantly kept before the farmer through the agency of agricultural papers and other agricultural publications, and we may look with confidence to the time as not far distant when the farmer, with others, may receive the benefits of education, and legislation, of our common country, when his rights and privileges shall be equally protected, and when education shall make him intellectually strong as well as numerically and physically so. ONEIDA.

Western Virginia.

Rev. CALVIN HAWLEY, formerly of Otsego county, N. Y., emigrated to Harrisville, Va., last season, and since his residence there, has written an article describing the country, which has been published in the *Freeman's Journal*, Cooperstown, N. Y. We give the following extracts: "It may be proper to remark that the part of the State denominated Western Virginia, lies between the mountains, or Blue Ridge, and the Ohio River, dividing the Commonwealth north and south, and embraces an extent of country some 400 or 500 miles in length, and varying from 300 to 350 miles in width, a large part of which is in a wild state, and little or none of it in what could be called a good state of cultivation. The face of the country is more rough and hilly than any other I ever saw. The hills are not as high as I have seen in other States, but there are more of them, and but little table land on the top. The ridges are very narrow in many places, only wide enough for a road, consequently as soon as you arrive at the summit of a hill. you immediately commence descending the opposite side. But the hills are generally free from stone, and the soil rich and productive. The timber is as fine as can be found in any country, and of any quality that can be found in the United States. More of oak than any other kind. Pine, chestnut, hickory, locust, poplar or whitewood, sycamore, beech, maple, black walnut, &c. can be found in great abundance. The trees grow very straight and high, with but few if any low branches. The whole country is well watered by springs and streams that never fail, and have current enough to keep them pure. Such a thing as a swamp or pond of stagnant water can scarcely be found in all the State; consequently there is no country, I believe, more healthy than this, where there are more aged people according to the number of inhabitants. It is common to see persons eighty and even ninety years old riding about on horseback ten or fifteen miles from home on business,—a thing but seldom seen in Otsego county."

"The soil from its appearance would not be considered very productive. It is of a sandy make, mixed with loam and clay, and in some places of a reddish cast; the bottom lands are generally of a darker quality and very productive. There is but little land, however, but what would abundantly reward the hand of culture. This region is well adapted to raising stock. I have never seen so large and healthy looking sheep anywhere as I have seen here, and they require but little if any feeding, still they do better with some attention in this respect. Cattle, horses and swine, do extremely well. All kinds of English grain that is raised at the North will grow here and produce more plentifully. Apples, pears, peaches, plums, cherries, quinces, grapes, melons of all kinds, and wild berries of nearly every specie, grow bountifully and with very little labor. The sweet potatoe grows to perfection.

Guano—Its effect compared with Ashes.

STEPHEN H. SMITH, states to a committee of the Rhode Island Society, for the Encouragement of Domestic Industry, that on one acre of sandy loam, which without manure would have produced twenty bushels of corn, he sowed broadcast, on the furrow, after deep plowing, 500 pounds of best guano, well pulverized, and mixed with four times its bulk of dry loam. After harrowing, it was planted with corn. The product was 50 bushels. In 1845, he seeded down half an acre of ground, a sandy loam, with eight quarts of millet, ten pounds of clover, one peck of herds grass and one peck of red-top seed. This lot was dressed with 350 pounds of guano, worth $9, applied as above described. On an adjoining half acre he put the same kind of seeds and in like quantity. Instead of guano, he applied 64 bushels of unleached ashes, worth $8. The crop of millet was perceptibly best where the guano was used, and about ten days earliest. The crop of grass in 1846 was one-fourth the largest where the ashes were used. In 1847 the clover had nearly disappeared where the guano was applied, but remained well stocked where the ashes were put. The first and second crops this year were decidedly in favor of the ashes.

"The Spirit of Agriculture."

Prof. E. P. BARROWS, of the Western Reserve (Ohio) College, in a lecture delivered before the Trumbull County Agricultural Society, speaks in the following eloquent language of the happy results which may follow from the present awakened attention to agriculture:

"We have," he observes, "cheering proofs that the spirit of agriculture is awake. Let this spirit be cultivated, for it has the primitive seal of Heaven upon it. It is the spirit of peace and plenty, and good order, and good morals. It adorns the earth with luxuriant meadows, and goodly orchards, and golden harvests, and pastures covered with flocks and herds. It clusters around itself all the auxiliary arts and occupations, commerce, and trades and manufactures—all nourish it and are nourished by it. It fills the farmer's granaries, and makes his fireside happy and cheerful. While others beat their plough-shares into swords, and engage in the work of desolating the earth, destroying her inhabitants, and filling her with crime and misery, let us have wisdom enough to adhere to the employment of our primeval ancestor—a far nobler employment than that for which his degenerate sons exhibit such a melancholy fondness. In the vast field of agricultural investigation and improvement—a field but hitherto partially explored—let it be our ambition to win laurels not steeped in tears and blood, but gathered in peace and quietness, and bleating flocks, and lowing herds, and waving harvest-fields, and smiling, light-hearted, industrious citizens."

Seedling Potatoes—Running out of Varieties, &c.

In the March number of the Cultivator, I noticed an article from Mr. H. A. Parsons of Buffalo, on the necessity of change of seed, and running out of varieties. On referring back, I perceive that he has written much on the same subject. I do not intend to enter into a controversy with Mr. P., but will submit a few facts and a few practical hints to your readers.

Mr. Parsons says in his premises, that "an occasional instance of success or failure proves nothing." So we all say. He refers to the opinion of Mr. Cooper, who thinks the deterioration of the potatoe is owing in a great measure to the use of *poor seed;* but Mr. P. does not believe that farmers are generally in the practice of using poor seed—that is, small potatoes. If Mr. P. will extend his observations to other parts of the State, I think he will learn that a very large portion of the seed committed to the earth would not make a very good appearance on the table—he would find the tubers generally small and of ill form. Farmers have, in many instances, sold all the good potatoes they could spare, after leaving a supply for their own table. I would ask Mr. Parsons, and every reader of the Cultivator, to inquire of their neighbors, to the number of twenty or more, and see how many are in the habit of selecting the fairest and best shaped potatoes for seed.

"Some varieties having ceased to produce balls," does not frighten me, and is no sufficient cause of alarm. I have dug potatoes, more or less, for thirty years, and have always noticed that where a hill or plant had a profuse crop of balls, the tubers were lacking in size and quantity.

I believe in the principle that like produces like; and if this principle were adhered to, and the best always selected for propagation, we should hear but little about the "running out of varieties."

Mr. Parsons says—"The present disease in the potato was generally first noticed in this country in 1843. Soon after that, (1845), the agricultural census of the State was taken, which showed that the average product of the potato crop was only 70 bushels per acre: not half what it was 25 years ago." It is well known that in 1844 and 1845, the potato crop in this State was much injured by the rot—from one-fourth to nine-tenths of the crop was destroyed by this disease.

He concludes by saying—"I did not intend to make any remarks about the cause or remedy of the present wide-spread disease in the potato." Yet he quotes largely from European authorities to prove that the diseases with which the potato has been attacked, were induced by the age of the varieties and their (supposed) consequent debility. And from his own observation he has drawn the same conclusion—both now and heretofore. He therefore draws conclusions without intending to make any "remarks" in regard to the disease.

In conclusion, I commend Mr. Smith's zeal in the production of new varieties from seed. I say go on, and when varieties are produced which excel those we now have in yield and intrinsic value, let them be adopted; but let all be first *proved*, that we may only "hold fast those which are good." E. Hammond.

Long and Short Manure.

The committee on Farm Management for the N. Y. State Agricultural Society, in their report for 1847, speak of the different modes adopted by the competitors for premiums on farms, and observe—"All the competitors, with the exception of Mr. Delafield, prefer to use manure in its long or unrotted state, while the latter prefers to use it after it is well rotted; a careful examination of the answers, however, reconciles these conflicting opinions. We think that both theory and practice most clearly indicate that a cord of long manure will produce a greater amount of vegetable growth than the same cord would do if allowed to rot, exposed to the action of the sun and rain; because, during the process, a very great proportion of the ammonia will evaporate, and a smaller proportion of the saline matters will be leached away; but this loss will be avoided by the covering of muck, earth and plaster by which the heaps of Mr. Delafield are protected, and which absorb and combine with these valuable adjuncts to fertility. By Mr. Delafield's method, therefore, a greater amount of fertilizing matter is restored to the soil than existed in its unrotted state; but it also has the additional advantage of being presented to the growing crops in a form better fitted for assimilation."

Hints for Preventing Consumption.

It is not intended to give a chapter on the cure of the dire disease, consumption, believing that a few words on its prevention will be more useful. To insure success, we must begin with the infant subject—the offspring of healthy ancestors. Protect it in infancy with soft flannels next the skin, and let it breathe only pure air. In youth teach it that good health is the greatest of earthly blessings; without it there can be no enjoyment of life, and with it there should be no complaint of its defects. Teach it, that good health like a good estate, may be squandered little by little until it is bankrupt. Teach it that temperance in *all things* is essential; that there can be no violation of the laws of nature with impunity. Teach it to sit and walk erect, that the chest may be fully expanded, to protect the chest with flannel next the person, and other warm loose woolen clothing, at least during that season of the year that easterly or northeasterly winds prevail. Do not suffer the clothing so tight on the chest or body as to interfere in the smallest degree with the free expansion of the lungs. To keep the feet dry with thick oiled leather, loosely applied. Exercise several hours every day in the open air. Choose virtuous and cheerful companions, with whom singing and laughter may be indulged in; and finally, take time to eat and masticate your food well.

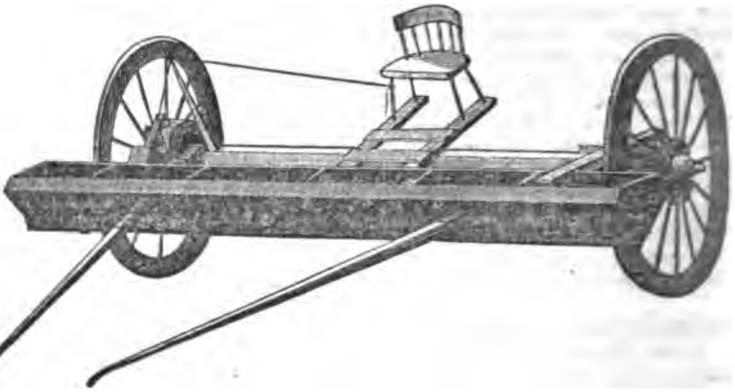
The above remarks are hastily thrown together, they are the result of observation and experience, and touch some points that are essential to the preservation of health, and too often neglected in the popular education of youth, or the practice of manhood. A. B. *Setzler's Store, Pa.*

Fastening Shingles.

In one of your back volumes I noticed something in regard to the manner in which shingles are nailed on, in some parts of the country, (I forget where;) but I think the practice of our carpenters is preferable; which is only to nail them in the *waist* or near the middle, so that none of the nail heads, except on the bottom and top courses, are exposed to the sun. It was found that in the old practice of nailing in the buts, the action of the sun would in time loosen the nails and admit the rain. P. S. Bunting. *Crosswicks, N. J., March* 14, 1848.

Seymour's Machine.

The annexed cut represents Seymour's sowing machine, advertised in our last. It has been pretty extensively used in Western New-York, and is much approved. We saw many acres of various kinds of grain on the farm of **John Delafield**, Esq., near Geneva, last season, which had been sown with this machine, and we never saw grain stand more evenly on the ground. Mr. D. assured us that he could sow anything,—lime, plaster, poudrette, guano, &c. or any seeds, from grass seed to peas or Indian corn, with perfect exactness, graduating the quantity per acre to a pint. It is manufactured by P. **Seymour**, East Bloomfield, Ontario county, N. Y.—Price $45.



Seymour's Broadcast Sowing Machine.—Fig. 49.

Horses for "all work."

I notice articles in the Cultivator in reference to horses for all work. If farmers want horses of this kind, let them get the Cleveland bay, from Yorkshire, England. They are invariably of a bay color, with black legs, mane and tail. They are used for all work except the race course. They are from 15 to 16½ hands high, and weigh from 1000 to 1300 pounds each, with bone and sinew in proportion. They are easily kept in condition, inclining to be fat. They have good temper and good action as walkers, trotters, and slow gallopers. They are used in England for carriages, artillery, heavy carting, and even for hunting, with heavy weights. I think the most suitable horse farmers could breed would be Cleveland bays, 15½ hands high, weighing eleven hundred pounds. J. H. Reid.

Frederickton, New-Brunswick, March, 1848.

Experiment in sowing Wheat.

At the winter meeting of the Yates County Agricultural Society, January, 1828, the following account of an experiment tried by me for the purpose of ascertaining the proper quantity of seed wheat for one acre of land was read; for which the Society gave a premium, and voted unanimously to have it published in the Cultivator and Genesee Farmer :

On the 23d of September, 1846, I sowed four plats of ground with wheat, on a summer-fallow that had been plowed five times during the summer. The ground was prepared in the following manner : After the soil had been finely pulverized with a hoe and rake, I measure off accurately four sections each two feet square, leaving a small space between each of about six inches. The squares were then numbered and subdivided as follows : No. 1 in squares 1½ inches each way ; No. 2 in squares of 3 inches ; No. 3 in those of four inches ; and No. 4 in squares of 4 4-5 inches, including the outside lines of each large square. I then, with the thumb and finger, carefully planted one kernel of wheat in the corner of each small square.

The yield was as follows:

On the 19th of July last, I carefully gathered the four parcels, keeping each by itself—shelled each by hand and counted the grains of each section separately. The results of which are given in the following table: On the 17th of August, I had 4 ounces of the wheat carefully weighed by sealed scales ; and by counting all the grains weighed, I found there were 780 grains in one ounce ; from which I have made an estimate of the different yields, and also the rate of the different amounts of seed per acre, for which see the following table :

No. 1	No. 2	No. 3.	No, 4.	
289	81	49	36	No. of grains planted.
203	60	40	30	No. of grain that grew.
286	136	112	104	No. of heads produced,
26	35	39	42	Av. no of grs. per head.
7458	4765	4452	4309	Whole number of grains.
108	69	64	63	Yield per acre in bushels.
B. lb 4 12	B. lb. 1 10	lb. 42¾	lbs. 31½	Amount of seed per acre in bushels and pounds.

It may be proper to add, that the soil was a clayey loam, which had never been manured and had been kept for pasture during the preceding six years. Should the ground be well prepared and sowed with a drill, it is probable, from the foregoing experiment, that the yield would be greater than if sowed broadcast.

Milo, Yates Co. N. Y. Jan. 1848. A. C.

Statistics of Lowell.

Messrs Edits.—From the statistics of Lowell collected in January last, we learn that the number of incorporated manufacturing establishments in the place at that time, was twelve. Capital invested in them $12,110,000. Number of mills 47. Number of spindles 301,297. do. of looms, 8749; number of females employed, 8,635; do. males do., 3,995. Number of yards made per week, of cotton, 1,920,900; woolen, 21,291; carpeting, 6,500; rugs, 40. The number of pounds of cotton consumed per week is 637,000; do. of wool, 46,000; yards of printed goods 380,000; of dyed do., 1,235,000. Twenty-five thousand four hundred tons of anthracite coal are used per annum in these establishments, and of charcoal 36,303 bushels. They also consume 77,810 gallons of oil, and 35,000 of lard in the same time, together with 1,190.000 pounds of starch and 765 barrels of flour. Eleven of the establishments are warmed by steam, and one by steam and furnace. The average wages of females per week, clear of board, is two dollars; of males per day, clear of board, eighty cents.

The Middlesex Company makes use annually of 6,000,000 teasels, 1,716,000 lbs. of fine wool, 80,000 pounds of glue, $60,000 worth of dye stuffs, and $17,000 worth of soap.

There is a hospital for the benefit of the operatives, under the care of an able physician; two savings banks; three banks, to wit: The *Lowell*, with a capital of $200,000; *Railroad*, capital $600,000; *Appleton*, capital $100,000; a mutual insurance company; a library of 7000 volumes belonging to the city, the benefits of which are open to all on the payment of fifty cents a year.

Other manufactures produced in the city, aside from those above cited, and the machine shop turns out products to the value of $1,000,000, employing capital to the amount of $350,000, and about 1,200 hands.

The population of Lowell in 1820 was about 200; in 1846, 28,841; in 1848, estimated 35,000.

Preservation of Manure.

S. A. Law, Esq., in his address before the Delaware county, (N. Y.) Agricultural Society, makes the following sensible remarks in regard to the preservation of manures.

"While the full value of manures is admitted, how few farmers have their yards so constructed as to prepare and reserve the greatest amount of fertilizing compost. Instead of barn and stable yards made lowest in the middle to retain those liquids which chemical analysis and actual experience have shown to be more valuable, and to contain in a more concentrated form, the elements of vegetation than solid manure, most farm yards are on sloping ground, as if constructed purposely for waste—and not unfrequently with a rivulet near by, to carry away all that may wash into it; instead of yards, in the fall of the year, filled with compost from the swamp, or from ditches, to be converted into manure, we see them empty, and usually provided with a ditch to carry off all moisture. Farmers who mean to be economical—who indulge in no unnecessary expense—and who would hesitate to spend a shilling for the gratification of a depraved appetite, by such practices as I have referred to, throw away dollars. Swamp mud, turf, leaves, weeds, and in fine, all the refuse of a farm, useless as manure in a natural state, when placed in the barn-yard or pig-sty, and thoroughly incorporated with materials there, becomes the best of manure, amply repaying the farmer for the time spent in collecting them."

Tan-bark for Manure.

I have been in the habit of supplying my hog-pen liberally with tan-bark, which enables the hogs to manufacture a large quantity of manure. The bark absorbs the liquid part, and is also a mechanical benefit in keeping the manure open and loose, as it naturally has a tendency to harden and bake; and if put into the corn-hill without sufficient care in planting, sometimes proves a positive injury. A day or two before using the manure, I incorporate with it ashes and plaster; and by putting this mixture into a hill, I raise corn with good success. E. R. *Hartwick, Otsego Co., March* 12, 1848.

Phosphate of Lime.

This substance constitutes the basis or earth of bones. In some of the dairy districts of Britain, where the land has long been grazed, it is said the phosphates have been exhausted in a great degree, and that the application of bones, or phosphate of lime, as a manure has been found very useful. Plants consume or take up this element in the shape of phosphoric acid. Wheat and other grains require this kind of food. Urine contains it in considerable proportion, and this is considered one cause of the great benefit of this substance as a manure for grain crops.

Phosphate of lime is not common. It has been found in Estremadura, in Spain, in large quantities, and has been carried to England at great expense and applied to the soil as a manure, but with what precise effects we have not learned.

We learn from Dr. Emmons that two localities of phosphate of lime have been found in this State; one near Hoosick-Corners in Rensselaer county, and the other in Warren county. The proportion of phosphoric acid combined with the lime is said to be unusually large in both instances; and the highly productive character of the soils of those localities, especially for wheat, is said to have first attracted attention.

Mr. J. C. Nesbit states in a late number of the *Mark Lane Express*, that being on a visit to a farm near Farnham, his attention was called to a kind of marl, which was said to produce remarkable fertility when applied to the soil. On analysing this marl with great care, he found it to contain from four to five per cent of bone earth.

The Salmon of Oregon.

Lieut. Howison of the U. S. navy, in his report on Oregon, states that the Salmon enter the mouth of the Columbia in May, and make their way up the stream in immense shoals, for the distance of twelve hundred miles, being found in the month of September, at the very sources of the Columbia. The young fry pass out to sea in October, when they are nearly as large as herrings. Different families of salmon resort to different rivers, which empty into the Pacific on the northwest coast. The largest enter the Columbia, coming from the north. They average twenty pounds each, and some weigh forty pounds.

These fish constitute the chief subsistence of many thousand Indians, who reside in the country watered by the Columbia, and its tributaries; and besides affording an abundant supply to all those and the white settlers of Oregon, eight hundred barrels a year are exported.

Lieut. H. remarks that strange as it may appear "none but Indians have ever taken a salmon from the waters of the Columbia; it seems to be conceded to them by an inherent right which no white man has yet encroached on." They are very superstitious respecting this fish. When they first appear they are permitted to pass on for several days unmolested, and for three weeks after their arrival nothing can induce an Indian to sell one. During the whole season, on catching a salmon, they immediately take out its heart and conceal it till they have an opportunity to burn it; their great fear being that this sacred portion may be eaten by dogs, which they shudder to think would prevent the fish from coming in the river any other year.

Potato Disease.

We have received a letter from Mr. J. F. Simonds, of West Poultney, Vt., in which he gives some facts that have led him to the conclusion that a remedy for the potato disease is to be found in using *small potatoes for seed*. We will not venture to say what caused the exemption from rot in the cases he mentions; but if small seed potatoes were any security against the malady, the crops of this vicinity for the last two years ought certainly to have escaped. But the loss by rot has, probably, been as great here as in most sections, notwithstanding a very large proportion of very small potatoes has been used for seed.

But a theory still more novel than the above has been broached, viz., that the disease is attributable to the influence of a *comet!* A year ago, or more, we saw this conjecture put forth in a Massachusetts paper; and lately we noticed that the same idea has been advanced by a correspondent of the *Monthly Visitor*. The writer alluded to thinks "it is possible, and even probable, that the comet which appeared in the month of February, 1843, with such brightness and splendor as to be seen with the naked eye near the sun and about noonday, imparted something to the earth, directly or indirectly, which was deleterious to the potato plant."

But admitting the assumption that a poisonous principle was actually imparted to our atmosphere by the comet, it is certainly very singular that the potato of all the productions of the earth, should have been made the special victim!

Of late, we have not thought it an object to occupy much time or space in reference to the potato disease; but having seen in the *Gardener's Chronicle*, an account of a very complete series of experiments tried last year in the garden of the London Horticultural Society, we are disposed to give our readers a brief abstract.

In the experiments alluded to, the soil and seed were treated in various ways, and the proportion of diseased tubers ascertained on digging the crop. The substances employed were lime, charcoal, salt, chloride of lime, potash, fat, sulphuric acid, coal-tar, chalk, sulphate of soda, nitrate of soda, sulphur, and sulphate of magnesia. In some cases these substances were mixed with the earth near the potatoes, and in other cases the sets or tubers were sprinkled with the substances before planting. The various articles were applied not only separately, but mixed in almost every way, and the rows thus treated, carefully compared with each other as to yield and condition, and also with parallel rows which received nothing. Full tables (for which we have not room) are given, showing the results in each particular case. No conclusion could be deduced from either of the trials, or from the whole taken together, in favor of the usefulness of any application or treatment. The *Chronicle* remarks, so capricious was the enemy in its attacks, "that a result obtained in one place was directly reversed by a result in another place only a yard or too off—there being no appreciable difference in soil or situation or circumstance. For example, the percentage of diseased potatoes found where nothing had been used in the soil, was as high as 32.50 and as low as 5.74. And although in the cases of some applications no disease whatever was found when the crop was taken up—nevertheless, in many instances the very same applications were found connected with above 50 per cent. of disease."

In connexion with the above, experiments were tried with seedling potatoes, and also with wild ones from South America. The seedlings were from seed obtained from various parts of Germany, from Poland, and from some districts of England. Some of the plants were started in hot-beds and afterwards transplanted to open ground, and others were grown entirely without protection. The tables show that all these suffered as badly as other varieties. The account says—"seedlings, concerning which so much obviously unfounded expectation was entertained, proved no more exempt from the disease than old and long cultivated varieties."

The wild potato fared no better. We are told—"A perfectly wild form of the root, fresh from its native mountains, exhibited the characteristic blotches in a worse degree than any other sort in the garden."

Farming on Thirty-seven Acres.

In our last volume, (page 180), we gave an article being the substance of a statement of J. G. CHADSEY to the officers of the Rhode Island Society for the Encouragement of Domestic Industry. From the report of the doings of the Society for the year 1847, we notice that Mr. CHADSEY'S farming still continues profitable. He observes—"As my farm has been more productive the present than any former year, I will briefly state the net proceeds of my crops, so far as ascertained. My mode of cultivation has been the same as before communicated to the Society, and shall, therefore, omit particulars, in order to avoid a repetition of my last year's statement. I have cultivated about two acres more than last year, and increased my farm expenses very considerably, mostly for labor, which have been met with more than a corresponding increase of products. I have already (Dec., 1847) sold $842.43 worth, and estimating the balance at the same rate, my crops the present year will amount to $1410 60

Expenses, viz: for labor, board, manure,
farming utensils, &c. 564 69

For the use of my farm of 37 acres, $845 91

Curing Corn.

I last year cut up a portion of my corn and cured it "Yankee fashion." I succeeded well, not losing an ear in a hundred bushels. The fodder was the best I have ever seen. It was cut part in September and part October. I am determined to save my corn fodder that way hereafter for many reasons: 1. The corn is as good if not better than by the old way of gathering. 2. The fodder is greatly superior. 3. The field is cleaned by the operation, and with the help of a cutting-box, the stalk is returned in manure, much more advantageously to the land. 4. Our way here, required walking over a field six times to gather fodder and corn, whilst this requires but three times. S. M. HYAMS. *Nachitoches, April*, 1848.

Answers to Inquiries.

"FAMILY BOLTER."—JETHRO, Reclusa, Georgia. Fitzgerald's mill has a portable bolter which may be attached to it, and will make the finest of flour from any kind of grain. The bolter may be had at the ALBANY AGRICULTURAL WAREHOUSE—price $40.

"CABBAGES TURNING TO TURNIPS."—C. N. B., Orient, L. I. The cause of cabbages turning to turneps is, probably the mixture of the two species while in blossom. The whole of this tribe (*brassica*) will mix in this way, and they should on this account be kept at a distance from each other when put out for seed.

FISH MANURE FOR ONIONS.—C. N. B. We have never tried fish manure for this purpose, but should suppose a compost made with fish and well worked over, would answer well.

NITRATE OF SODA.—S. J. W. The South American article could be had in New York for about five cents per pound, by the quantity. Its value as manure as indicated by experiments, has been various. Its effects are generally more obvious in the growth of straw than in grain.

R. R., Fayetteville, N. C.—We sowed a part of the same lot of Osage Orange seed, and we should think nearly every seed vegetated. Yours may come up this spring.

STEEL CULTIVATOR TEETH..—T. B. Alabama. The price of Rogers' improved Cultivator teeth is 50 cents each, by the quantity, or 62½ cents single. They weigh three pounds each.

FATTENING SHEEP IN WINTER.—E. F., Forkston, Pa. The quantity of grain fed to sheep per head, daily, varies with the kind. Of Indian corn, from two gills to a pint, and in some cases a quart, are the quantities usually given. It is customary with the best feeders to give some potatoes and other vegetables in connection with the grain.

CHURNING BY WATER-POWER.—E. F. A discharge of five gallons of water per minute, with eight feet fall, would probably work an overshot wheel, by which the "milk and cream of a dozen cows" might be churned.

AMERICAN PIPPIN.—E. F. The apple described under this name by DOWNING, is not identical with the Newtown pippin, though he mentions that the latter is frequently called by this name abroad. The American pippin is called in some sections the *Grindstone*. It is chiefly valuable for late-keeping. It is of a dull red color, with star-like russet specks. Its form is roundish, somewhat flattened; keeps till June.

Notices of New Publications.

THE HORTICULTURIST AND JOURNAL OF RURAL ART AND RURAL TASTE. Edited by A. J. DOWNING, author of "Landscape Gardening," "Fruits and Fruit trees of America," and other works.

The third volume of this periodical will commence in July. Under the judicious supervision of Mr. DOWNING it has attained a character and reputation not inferior, we are safe in saying, to any similar work in existence. The second volume, which is completed with the No. for the present month, forms a beautiful and valuable book, embracing a great amount of practical informationon the subjects of horticulture, pomology, landscape gardening, botany, rural architecture, entomology, and rural economy generally. Each volume contains twelve plates—one to each number—and there are besides more than one hundred other engravings of buildings, trees, plants, &c. The number of communications to the last volume is large, and they are from the most eminent and successful horticulturists in all sections of this country. We are gratified that it receives a substantial patronage, which ensures its continuance. It is published at this office, by the proprietor of the CULTIVATOR, terms, $3 a year. Each number contains 48 pages—printed on fine paper, and executed in a style equal in every respect to the best periodicals of the country.

NEW EDITION OF WEBSTER'S DICTIONARY.—The new edition of this work lately issued by Messrs. G. & C. MERRIAM, of Springfield, Mass., is "got up" in beautiful style. It comprises in one quarto volume the entire dictionary of WEBSTER which had formerly been published in two volumes, and it is sold at the very low price of *six dollars*—a cheaper work in proportion to its value and style than we have known offered.

Of the value of this work as a dictionary of the English language, it is unnecessary for us to speak—it is acknowledged to be unequalled, and is the only work which should be used as a standard in this country. The present edition has been executed under the supervision of Professor CHAUNCEY A. GOODRICH, of Yale College.

THE FARMERS' LIBRARY AND MONTHLY JOURNAL OF AGRICULTURE. This publication is now nearly at the close of the third volume. The May number completes the republication of the "Book of the Farm," a standard and elaborate Scotch work. The department devoted to a "Monthly Journal of Agriculture," opens for May with a fine portrait on steel, of MARSHALL P. WILDER, Esq., President of the Massachusetts Horticultural Society, one of the most zealous and spirited Horticulturists in the country. The plate is accompanied by a well-written memoir of Col. WILDER, by the editor of the "Library."

This work continues to be under the supervision of J. S. SKINNER, Esq., one of the fathers of agricultural literature in America. It is published by Messrs. GREELY and MCELRATH, who have evinced much enterprize and liberality in its neat execution, and numerous illustrations. Terms, *Five Dollars* a year.

SILLIMAN'S JOURNAL OF SCIENCE AND ARTS.—The number for May contains its customary variety of useful articles, among which we notice a Review of the Annual Report on the U. S. Coast Survey, an article on the Theories of Electrical Phenomena, with various valuable matters under the head of Scientific Intelligence. Edited by Messrs. SILLIMAN and DANA; published at New-Haven, on the first of every second month—$5 a year.

EWBANK'S HYDRAULICS AND MECHANICS.—Part VII of this work, describes the first steam engines, which ends the fourth book of the series. Book V opens with "novel devices for raising water, with an account of siphons, cocks, valves, &c. &c." The subject of raising water by machinery is lately attracting much attention, and those interested in the matter would do well to purchase this interesting work. Republished by GREELY and MCELRATH, New-York, in numbers, 25 cents.

New-York State Ag. Society.

The Executive Committee met at the Society's room, Albany, May 1, and 12. The several committees for awarding premiums at the next fair, were appointed. The names will be announced in due season.

THE TIME OF HOLDING THE FAIR was fixed for the *5th, 6th and 7th* of September next, instead of the 12th, 13th and 14th of that month, as had been previously appointed.

VISIT OF PROF. JOHNSTON TO THE UNITED STATES.—It having been suggested that Prof. JAS. F. W. JOHNSTON, of Edinburgh, might be induced to visit this country, the secretary was authorized to open a correspondence with other societies in relation to engaging the Professor to lecture on Chemistry and other sciences connected with Agriculture, and an appropriation was made on the part of the Society towards defraying the expenses. It is to be hoped that other societies will come into this measure, and that sufficient funds to accomplish the object will be received.

STAFFORD'S PATENT DRYER AND COOLER.—Mr. J. R. STAFFORD, of Cleveland, Ohio, exhibited a sample of Indian meal which had been prepared by his apparatus fifteen months. It was as perfectly sweet as the freshest and best meal. It had been kept in a common barrel. Mr. S.'s invention appears to be of great value and accomplishes an object which has long been sought. It dries meal and grain by steam. The apparatus consists of a cylinder made of sheet-iron, with flanges arranged on its outer surface. The inside of the cylinder, heated with steam, is made to revolve, carrying round with it the grain or meal, which is thus completely dried without the possibility of being scorched. Samples of meal, flour and grain thus prepared may be seen at the Society's rooms. On motion of Mr. PETERS, the following resolution was adopted:

Resolved, That we consider the Steam *Drying* apparatus of Mr. Stafford, *for* the preservation of bread stuffs from souring or heating, a most valuable invention, and one deserving of extensive encouragement, and that we deem it important that the government of the United States should adopt measures to test the qualities of the flour and meal, by sending quantities of it in our public vessels on long voyages in warm climates, and in such other manner as will be best calculated fully to test its preserving qualities.

ADDRESS OF Prof. J. P. NORTON, BEFORE THE N. Y. STATE AG. SOCIETY.—The *Pairie Farmer* thus appropriately notices this address:—"We find it characterized throughout by the author's usual clearness and simplicity of style, and by his freedom from cant and humbug. Professor Norton is, to our apprehension, the best of all the scientific writers on agriculture in our country. He recognizes fully the dependence of theory on experiment, as its test, and considers no theory of value any farther than it is borne out by experiment. His addresses are calculated to make plain to the common understanding, matters which in most hands are wrapped up in impenetrable fog; and it is this practical apprehension which gives him his superiority. The address before us will be read with profit by every intelligent man, whether indoctrinated in scientific lore or not; and we hope it may find general circulation.

☞ We invite attention to the advertisement of Mr. J. B. DORSEY. We are informed that the property he offers for sale is of a very desirable character. The James River and Kanawha canal passes through it, and it has a market at hand for all kinds of meats, fowls, butter, milk, vegetables, &c.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications received during the last month, as follows:—H. H. Ingalsbe, A. B. McClean, R. Watkins, C. N. B., F. Roys, J. M. Hyams, A Subscriber, Jethro, P., F. Holbrook, D. Thomas, M. W. Philips.

Books, Pamphlets, &c., have been received as follows: Public Documents from Hon. J. I. Slingerland—The Grandeur of Nations, an Oration, by Charles Sumner, Boston, for publisher. T- B. Peterson, Philadelphia—To — for Premium List, &c. of Yates. Co. Ag. Society.

Winter Grain.—The prospect for winter wheat, from what we learn, is favorable to a good crop. Rye, in this vicinity, was somewhat winter-killed, but we understand the late rains and favorable weather have improved its appearance.

Fruits.—Peaches were killed in the bud by the extreme cold of the 11th of January last. There have been no blossoms in this vicinity. Plums gave but few blossoms, and cherries rather a small show. Was cold the cause of the failure in the two latter fruits? Apples blossomed well, and pears made an unusual display, and the fruit appears well set

Good crop of Wheat.—Mr. R. J. Livingston, of New-Brunswick, N. J., informs us that he raised last year from 8 22-100 acres, 272 bushels of R. Harmon Jr's- improved white flint wheat. Five years ago, he states, his neighbors told him nothing could be made to grow on the lot. The means used to produce the wheat were, "the subsoil plow, clover, muck and ashes."

Sale of Short-Horned Cattle and Merino Rams.—It will be seen by Col. Sherwood's advertisement that he proposes to sell a number of his cattle and sheep at the State Fair at Buffalo. In order to afford facilities for those wishing to sell or purchase stock, the officers of the State S. have decided to keep a register of such animals as may be offered for sale at the time of the Fair. This will be a matter of great convenience. In reference to Col. Sherwood's stock, we have before remarked that it has been bred with great care, and in blood and qualities will compare favorably with the best herds in the country.

Kinderhook Wool Depot.—We invite attention to Mr. Blanchard's advertisement of this wool depot. This is the third year the establishment has been in operation, and we believe it has given entire satisfaction to all who have been connected with it in business transactions.

Premium Crops of Ontario County, N. Y.—The Agricultural Society of this county awarded premiums for the following crops, grown in 1847. *Wheat*—61 bushels produced on one acre and forty-two rods—equal to 48 bushels and 18 pounds per acre—crop grown by Uri Beach, of East Bloomfield. *Indian Corn*—88 bushels per acre—crop grown by Geo. Rice. of East Bloomfield. *Barley*—55 bushels per acre—grown by Bani Bradley, East Bloomfield. *Oats*—70 bushels per acre—grown by Bani Bradley.

The Horse Gifford Morgan.—We invite attention to the advertisement of this horse in the present number. We are informed by those who have lately seen him, that he was never in better condition, and that he still shows all that animation and vigorous action for which he has been distinguished.

Great Trotting.—An American bred horse called *Blunderbuss*, aged twenty years, lately performed in England fifteen miles in forty-eight minutes and six seconds. His antagonist was seven years old—the old horse won by a quarter of a mile. The said match was made in harness, and the roads were in rather rough condition.

Black Hawk.—By an advertisement in our last, it will be seen that this justly esteemed horse of the Morgan stock will be kept at the stable of Messrs. Hill in Bridport, Vermont, the present season. We believe the popularity of this valuable animal continues undiminished.

Correction.—In Mr. Holbrook's article in our last, fourth line from the bottom of the first column, for "where the frost is three or four inches deep," read when the frost is out three or four inches deep.

The Taintor Importation of Merinos.—Mr. A. L. Bingham, of Cornwall, Vt. writes that the lambs from rams of this stock with ewes of his old flock, "make the most splendid cross" he "ever made."

A good use for Bayonets.—John Q. Wilson, Esq, of this city, has called our attention to a very neat and handy onion-hoe made from a bayonet. A quantity of bayonets having been damaged by fire, Mr. W. suggested that they might be profitably worked up into tools of this description. The socket admits the handle, and about eight inches of the bayonet, curved to the requisite angle, forms the blade of the hoe, which being of steel carries a sharp edge, and in proper hands is *death* on weeds.

Draining—At a late discussion of the subject of draining, at a meeting of a farmer's club in England, it was unanimously admitted that draining should at all times be followed by subsoil plowing, as affording a more ready percolation to rain-water, by which the fertilizing properties of manure in the soil are more effectually held in solution and conveyed to the roots of the growing crop. It was agreed that the best system of draining is by pipes and stones; that no fixed rule as to depth can be followed, as that depends in a great measure on the situation of the land and the nature of the soil and subsoil; but that in all cases the drains should be, when covered, below the reach of the plow.

Wayne County, Michigan.—Mr. Chas. Betts. of Redford, Mich., writes: "The capabilities of this county are barely beginning to be developed. Science is gradually working its way into the humble dwellings of the farmers of Michigan. Her potent energies will convert the yellow barrens into blooming fields. A thorough system of draining must be adopted throughout the entire county. There never was a place where a thorough knowledge of the principles of draining and their practical utility, are more absolutely needed than here."

Use of Ether in Animal Surgery.—The English papers speak of the use of this substance by veterinary surgeons in performing surgical operations on horses and dogs. The animals are made entirely insensible to pain by the inhalation of the vapor, and the operations are performed with much more facility and accuracy than in the ordinary way.

Value of Corn-Cobs.—We have frequently spoken of the value of grinding corn with the cobs for feeding cattle and horses. When cattle are fed a large quantity of meal, it is not easily digested, owing to its lying too closely together in the stomach. The gastric juice does not easily penetrate the mass. The principal advantage of the cob, we suppose to be that it renders the meal lighter, and enables the digestive organs more easily to manage it. Still we have no doubt that there is some *nutriment* in cobs. We remember an account well authenticated, of a woman in Maryland who in a eason of great scarcity for hay and other cattle-food, egged the corn-cobs from her neighbors, which she oiled and gave to her cow. She wintered the cow in is way, and brought her out in better condition in pring than most of the stock in the neighborhood. We ave known of other instances which showed that the ob was capable of affording support to animals.

But a *radical* kind of writer in a late number of the *enesee Farmer*, states that he fed cattle and horses corn and cob meal, and that it *injured* them! And order to show his opinion of the worthlessness of this od, he recommends that "crushed flints and ground lass" be used instead of cobs.

A counterpart to this is given in the address of W. . Lamport before the Ontario County Agricultural ociety: He says—"Cob meal makes a good feed for attle, horses or hogs. A friend of mine in Yates ounty, informed me, he wintered a span of farm horses nd kept them in good healthy condition with ground obs. His course was to thresh off the corn leaving om one to two quarts of corn to the bushel of cobs; hich being ground fine he fed them freely, but with nohing else save dry barley straw."

This is giving rather more value to cobs than we are isposed to allow, but we are confident it is better to rind them with the corn than to feed stock with meal rom corn only,—especially when a considerable quanity of meal is to be given.

Preserving Fruit.—In the first number of the ransactions of the Massachusetts Horticultural Society, there is an account of a new mode of preserving pples and pears. The inventor of the mode, M. Paquet, of Paris, has received from the Royal Society of orticulture a medal. He presented on the 12th of une one hundred pears and apples, which it is stated ad not only preserved their beauty, freshness and flavor, but even their perfume. His fruit-house is described as a circular building, with an outer and an inner all—the size of the building being whatever is conenient. The distance between the outer and inner all is about three feet six inches. There are winows in both walls, a diffused light being preferred to arkness. The inner room, which is the depository of e fruit, is kept at a constant temperature of about 50 egrees (Fahr.); as low as 39 would not be injurious, ut 66 to 73 destructive." Boxes are made with rawers of oak; that wood being easier to be cleaned rom the remains of fruit which might decay. "In hese drawers," says the account, "the fruits are placed with small intervals between each, on a slight bed, ne-sixth of an inch thick, of saw-dust, (not pine, hich would communicate an unpleasant flavor,) highly ried in an oven, eight parts, and one part of very dry pulverized charcoal; and with this mixture the interstices between the fruits are filled to about two-thirds f their height, leaving one-third exposed." This mode s deemed greatly preferable to keeping fruits in moss, otton, paper, or other substances.

The fruit should be gathered with the greatest care, and not in the least bruised; the fairest and finest specimens selected. It should be gathered ten days before it is ripe. After it is gathered, it is directed to leave it in an open airy situation for about fifteen days, to sweat, and on no account be wiped previous to being deposited in the fruit-house.

Transplanting Evergreens.—It seems to be well established that June is the best month to transplant evergreens in this latitude. We know of several trials with white pines in this month which have succeeded etter than any we have known transplanted earlier. They require, as well as all resinous trees, great care n taking up, being much more injured in cutting the roots than hard-wood trees. As much earth as practicable should be left round the roots, and they should not be suffered to dry before they are again put in the ground.

Benefit of Toads.—These animals are very useful in gardens. They live entirely on insects, which they devour without much regard to the species—the selections being made by toads of different sizes, according to the bulk they are able to swallow. While the toad is small he is only able to feed on gnats, small flies, the smallest beetles, &c.; but when full grown he will swallow almost all insects that infest the garden or field, whether in the larva or perfect state. The number of insects which they are capable of devouring is surprising to one unacquainted with their habits. Several years since the writer ascertained that a large toad, which he kept confined for the purpose of experiments, would devour from eight to twelve grubs, the larvæ of the May-bug or cockchafer, (*Melalontha vulgaris*) per day. There is another advantage which they have over fowls, in gardens—they will do no injury to any plants, their mode of taking the insects being such that the plant is scarcely touched in the act. A few boards should be laid round the garden, raised about an inch from the surface, under which the toads will take shelter in the day-time, as they only feed during the night.

Usefulness of Birds.—Few persons appear to be aware of the immense number of insects destroyed by birds. Different species of birds prey on different kinds of insects, or take the same kinds of insects in different stages. Thus swallows, martins, &c. take their food in the air, and catch insects while in the perfect or winged state. They hover much near water, and devour myriads of those insects which live in that element in their first stages. The common apple tree caterpillar is eaten by few birds, but to the cuckoo it seems to be the natural food. One of these birds will in a short time destroy a nest of these injurious pests. They tear open the web with their bills, and besides gorging their craws with the worms, will kill many which they cannot swallow. Robins take their food mostly from the ground—taking such worms as attack grain, grass and garden vegetables. They also eat angle-worms and beetles.

Many kinds of birds may be induced to take up their abode near the habitations of men. They seem to have an instinctive idea that man is (or ought to be) their protector. If they find themselves unmolested, they evidently enjoy a close proximity to the "lords of the creation," and they evince their happiness by their sportive actions and sprightly songs.

To Destroy Cockroaches.—A correspondent of the *Horticulturist* recommends the following, which the editor says he has tried and found "perfectly effectual."

Add about a teaspoonful of powdered arsenic to about a table-spoonful of mashed boiled potatoes; rub and mix them well together, and then crumble about a third of it, every night at bed time, about the kitchen hearth; it will be eaten up or nearly so, by the following morning. The creature is very fond of potatoes, and devouring them greedily, crawls again into its hole and perishes. I had occasion to have some alterations made in the kitchen stove six months after I pursued this plan, and found hundreds of wings and dried mummies of defunct cockroaches. Their disappearance was not attended with the slighest perceptible smell; and though five years have elapsed, not one has again been seen in my kitchen. In putting it into practice, any remaining crumbs should be swept up the next morning.

Maccaroni.—This article is said to be made from wheat of the finest quality, which after having been threshed, is spread upon the flat roofs of houses during the hot weather, and there left exposed to the sun during the day, and to the dews of the evening and morning for a fortnight or three weeks, till it becomes quite hard and dry.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, May 18, 1848.

FLOUR—Genesee per bbl. $6a$6.25—Oswego $6a$6.12½.

GRAIN.—Wheat, Genesee, per bu., $1.37a-140—Corn, northern, 57a58c.—Rye, 72a73c.—Barley 80c.—Oats, 46a48c.

BUTTER—Orange County, per lb., 20a21c.—Western, dairy, 16a17 c.

CHEESE—per lb., 7a8c.

COTTON—Upland and Florida, per lb., 5a7c.—New Orleans and Alabama, 5¼a7¾c.

BEEF—Mess, per bbl., $8.62½a$9.11½—Prime $5.50a$6.

PORK—Mess, per bbl., $10.69—Prime, $8.25.

HAMS—Smoked Western, per lb., 6½c.

LARD—in kegs, per lb., 5¼a6¾c.

HEMP—Russia clean, per ton, $230.—American dew-rotted, $130a$135.

HOPS—First sort, per lb., 5a6½c.

TOBACCO—Virginia, per lb., 3½a7c.

WOOL—(Boston prices.) May 18.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,..................	40a45	"
" half blood do	35a38	"
" one-fourth blood and common,.....	28a30	"

THE OLD MORGAN GIFFORD.

THE highest blooded Morgan Stallion, now remaining, will stand this season at the Stable of F. A. Wier, in Walpole, N. H.

Terms, $25, five dollars of which to be paid at the time of service, and the remaining $20 if the mare proves in foal. Pasturage furnished as usual.

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June 1, 1848.—3t*

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The Fleeces will be thrown into *sorts* according to *style* and *quality*.

A discrimination will be made between wool in good or bad condition.

All who desire it, can have their clips kept separate.

Sales will be made invariably for cash.

The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25c. on $100 for a term of three months.

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Arrangements have been made with Manufacturers using different grades of wool, to purchase the various sorts at their market value soon after being received at the Depot If the opening market price is not satisfactory, the wool will be offered for sale at such time as the owner may direct

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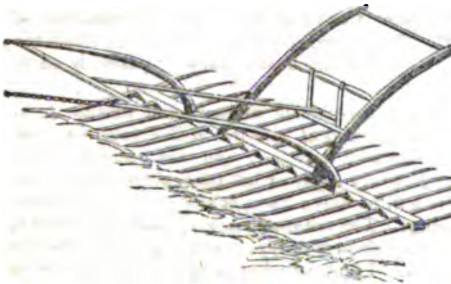
Kinderhook, N. Y., June 1, 1848.—3m



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Grain Cradles, Grant's, Wilcox and others.
Hand Rakes, all qualities.
Scythes, R. B. Dunn's, (the best in use.)
Snaths, Rifles. Whet Stones, (genuine Quinnebaug.)
Hay Forks, Partridge's make, best in use.

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It will give impulse, encouragement, and success to every one fond of raising fine, healthful and profitable farm animals. Every such farmer may be sure of real pleasure and profit in studying the book. The young sons and daughters of farmers will find evenings well and pleasantly spent in gaining from it the information for which they will have practical use the rest of their lives.—*Old Colony Memorial.*

Most earnestly do we wish that every agriculturist, in our section, would possess himself of this really interesting book, and abide by its precepts Sure are we, that the result would soon be exhibited in an improvement of stock generally.—*Parkersburg, Va. Gazette.*

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The individual who is seeking general information, will peruse it with pleasure, while the farmer who desires to gain practical knowledge, will read it with interest. The farmer who would carry on operations successfully in his line, should not be without it. —*Signal, Belfast, Me*

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We anticipate an extensive sale for this work.—*Ohio Cultivator.*

The work ought to be in the hands of every planter.—*N. O. Delta.*

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Many a valuable animal is lost, every year, for want of the knowledge here conveyed.—*Eagle, Brattleboro, Vt*

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"Cole's American Veterinarian," is an invaluable book. It is worth its weight in gold to any person having the care or charge of domestic animals. An agricultural friend, to whom we gave a copy, observed that it would save him a hundred dollars a year.

From the American Agriculturist.

The farmer will find much valuable information in this little work. By reference to its directions, they may be able to save a valuable animal, which otherwise might be lost.

From J. M Weeks, Vermont.

The American Veterinarian is the best book of the kind that I have ever seen.

From Levi Bartlett, New-Hampshire.

This book should be in the library of every farmer.

From the Farmer's Visitor, by Geo. Hill, N. H.

As the Editor of that excellent agricultural paper, the Boston Cultivator, and other kindred works, Mr. Cole has shown himself well qualified for the compilation of this work. We have known him for years, and he has proved himself to be one of the most persevering and able of our agricultural editors. We understand his new book has already had a free and extended sale. Many times its price to almost any farmer, may be saved in its purchase.

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100 agents could make money on this book in various sections of the country. None need apply except those who can command a small cash capital of from $25 to $50. Address, *post-paid*, the Publishers, 23 *Cornhill, Boston.*

For sale at the office of "THE CULTIVATOR." June 1—8t.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep A liberal discount to dealers. E. J. BURRALL.

Geneva. April, 1848—6t.

SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England.) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.

Troy, May 1st, 1848—4t.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description. attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R HAIGHT.
March 1—5t*. 107 Fulton-st., New-York.

P. SEYMOUR'S BROAD-CAST SOWING MACHINE.

THE undersigned is manufacturing this machine at East Bloomfield, Ontario County, N. Y., where he will promptly attend to all orders for machines, and all applications for the right to manufacture and vend the same.

This machine is the best implement in our country for the purposes for which it is intended. It sows *correctly* (and any desired quantity per acre) all kinds of grain, from peas to grass seed, including wheat, rye, oats, barley, buckwheat, hemp, clover and timothy seed; also plaster, lime, salt, ashes, bone-dust, &c. It is capable of dusting every square inch on a whole acre of land with less than half a bushel of plaster; and 30 or 40 bushels of lime may be thus evenly applied to the same amount of land if desired. It has recently been very much improved, and is now a very durable article, and recommends itself to every intelligent observer.

P. SEYMOUR,
May 1, 1848—2t*. East Bloomfield. Ontario Co.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany. N. Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery. and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years. (taken blind during infancy.) can now, after treatment, see to walk alone, and see articles a small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

P. S. Fluid Cataracts removed without an operation.

April 1—4t.

WATER PIPES FOR HYDRANTS, PUMPS, &c.,

Of	[illegible]	in. calibre, and	wg. from	1 lb.	8 oz.	to 3 lbs.	8 oz.	per yd.
"	[illegible]	do	do	1	14	6	6	do
"	[illegible]	do	do	2	8	8	4	do
"	[illegible]	do	do	3	8	10	8	do
"	1	do	do	6	10	14		do
"	1¼	do	do	6	12	17	8	do
"	1½	do	do	11		19		do
"	2	do	do	16	12	27		do
"	2½	do	do	23	8	50		do
"	3	do	do	28		59		do
"	3½	do	do	45		80		do
"	4	do	do	49		90		do
"	4	do	do	waste pipe.		15	14	do
"	4½	do	do	do		17	4	do
"	5	do	do	do		34		do

Prices of the above pipe 6 cents per lb. A. B. ALLEN & Co.,
May 1—2t, 189 & 191 Water-street, New-York

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,

May 1, 1848—6t. Cabotville, Mass.

NORMAN or MORSE'S GRAY.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15¾ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500. The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner, Mr Morse *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I. T. GRANT P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

PITT'S DOUBLE PINION HORSE POWER, SEPARATOR, AND CORN AND COB MILL.

I hereby give notice that I am now making a large number of the above machines, which I offer to those who wish to purchase as superior to any machine of the kind now in use.

For the information of those who are unacquainted with my Separator, I will say it threshes and cleans from three to five hundred bushels of wheat per day, and from six hundred to one thousand bushels of oats, and other grain in proportion.

The machine has proved itself superior to all others for the purpose designed.

It has been exhibited in various parts of the United States at State Agricultural Fairs, also in Canada, and has always taken the *First Premium*

My Double Pinion Horse Power has been in operation in Western New-York and Ohio for several years past, and is now admitted wherever it is known, for ease, convenience, strength, durability and cheapness of repair, to surpass any other Horse Power.

The Power is so constructed as to entirely obviate the danger and inconvenience of the large spur wheel, so objectionable in other Powers. It may be used to as good advantage with two horses as any two horse power, and is sufficiently strong and durable for eight horses.

Price of Separator one hundred and fifty dollars.

do Horse Power and Separator complete, two hundred and fifty dollars.

Five per cent. deducted for *cash*.

The Corn and Cob Mill I have enlarged to about double its original capacity. the teeth have been rendered more durable, which, together with other improvements has greatly increased its value. It is furnished with a hopper to feed loose grain, and a tube to feed corn in the ear.

The Mill gives general satisfaction, is durable, easily kept in order, and for the use intended is acknowledged superior to any other mill.

Price Fifty Dollars. JOHN A PITTS,
May 1, 1848. Rochester, Monroe Co., N. Y.

FARM IN MICHIGAN FOR SALE.

I HAVE a good improved farm of 145 acres. three miles from the village of Ann Arbor, for sale. Price $2200. Also 37 acres improved land one-half mile from said village—price $1200. Also 20 acres one and a half miles distant, for $500. Emigrants will do well to give me a call. WM. S. MAYNARD,
May 1. 1848—2t. Ann Arbor, Michigan.

VALUABLE BOOKS

For sale at the Office of the Cultivator:

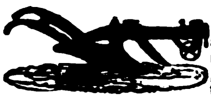
IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

THE EAGLE PLOW.



PROBABLY no Plow has been so long before the public with so few alterations, come into so general use, or received so many. and of so high grade premiums, as the Eagle Plows, from the establishment of Messrs. Ruggles, Nourse and Mason.

Notwithstanding the great diversity of soils, modes of culture, and the increasing competition of many distinguished manufacturers, and year after year having been subjected to the most systematic, persevering and thorough trials ever had in this country, it still stands at the head of the list for excellence of work, materials, workmanship, durability and price.

By referring to the advertisement of the manufacturers in this and the last number of the Cultivator, will be seen the high estimation put upon them by committees and plowmen, as well as their very general use where they have become known.

It is but just here to state, that in the most important trials in New England, the plowmen are required to use the same plows and teams which have been used on their farms, not less than sixty days previous to the trials. The owners are required to hold their own plows, to perform a certain amount of work, usually one-eighth of an acre of a given width and depth of furrows, in a given time. All of which rules and regulations are made known months before-hand, thus avoiding very many difficulties which often arise in deciding who really merit the awards and premiums.

A full and complete assortment constantly on hand and for sale at *manufacturer's home prices at wholesale and retail*, at the Albany Ag Warehouse, Nos. 10 & 12 Green-st., Albany, by

April 1. H. L. EMERY.

---

183 FRONT-STREET, NEW-YORK.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of Agricultural Implements of the latest and most approved patterns.

Plows adapted to every description of soil, embracing a greater variety of patterns than can be found in any other establishment in the United States.

Moore's highest premium Plows. Two and Three Furrow Plows.
Freeborn & Hitchcock's do. Side Hill and Double Mold do.
Minor, Horton & Co's do. Cultivators with Steel and Cast
Ruggles, Nourse & Mason's do. Teeth.
Prouty & Mear's do. Harrows.plain and double hinged
Subsoil do. Garden & Canal Wheelbarrows.

Single and Double Corn Shellers, price $5 to $10.

Straw Cutters, Greene's, Steven's, Sinclair's, and other approved patterns.

Mills for grinding Grain. Corn and Cob Crushers.

Horse Powers and Threshing Machines.

Fanning Mills,
Rice do.
Coffee Hullers,
Sugar Mills,
Grain Cradles,
Seed Sowers,
Revolving Hay Rakes,
Hay and Manure Forks,
Scythes & Snathes,
Ox Yokes and Bows,
Log and Trace Chains,
Spades and Shovels.

Plow Castings, Castings for Horse Powers, Mill and Gin Geer, &c., &c. Also on hand and made to order, every description of Brass, Copper and Iron Wire, Cloth, Sieves, Screens, Riddles, &c., &c, all of which will be sold as low as they can be purchased at any establishment in the country.

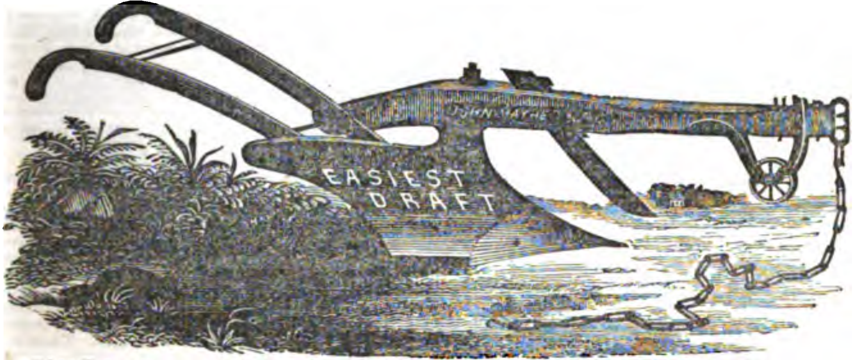
JOHN MOORE,
Ag. Warehouse, 193, old No. 183 Front-st., New-York.
April 1—3t

THE GENUINE MORGAN HORSE,

GENERAL GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of George A. Mason, two miles northeast of Jordan; Thursdays, Fridays and Saturdays at the stable of D. A. Munro, Camillus.

Terms—$10 the season. Insurance to be agreed upon. Pasturage furnished by either of the subscribers at reasonable prices. Escapes and accidents at the risk of owners. General Gifford was sired by *Gifford Morgan*. His dam a pure Morgan. Breeders of good horses are invited to call and see him.

April 1, 1848—3t. MUNRO & MASON.



JOHN MAYHER & Co's.

Highest Premium Improved Eagle Plow,

Manufactured and sold at the United States Agricultural Warehouse, 195 *Front-St., N. Y.*

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting. and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to cut out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island October, 1847, whose able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the whole Union,) running in its natural course, and keeping in its tru position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Sneaths, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER & Co.,
United States Ag. Warehouse, No. 195 Front-st., N. Y.
March 1, 1848—3t.

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SALE OF SHORT HORNED CATTLE.

I WILL Sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers, and young Bulls. A catalogue with their pedigrees will be ready at the time of the fair.

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and six South Down Rams.

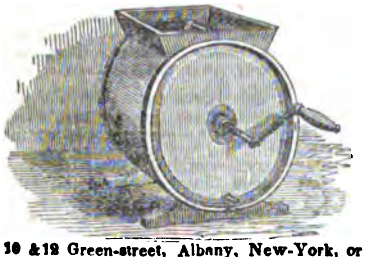
References—A. B. Allen, N. York; Sanford Howard and B. P. Johnson, Albany; Francis Rotch, Butternuts; and L. F. Allen, Black Rock. JOHN M. SHERWOOD.

Auburn, May 16, 1848.—4t

HORSE POWERS.

FARMERS in want of good Horse Powers and Threshing machines, will find them at the Albany Agricultural Warehouse and Seed Store. For description and recommendations, See Feb. No. of Albany Cultivator, for 1847 & 1848—also May No., 1848.

Descriptive Catalogue gratis.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos 10 & 12 Green-street, Albany, New-York, or by mail.

June 1, 1848. H. L. EMERY.

AFRICAN GUANO.

A SUPPLY of the above valuable Manure, just received and for Sale, at 2cts per lb., for one ton, or more; less than one ton, 2½cts. per lb. A cargo of Peruvian Guano soon expected to arrive, fresh from the Chinche Islands.

A. B. ALLEN & Co.,
June 1, 1848.—1t 189 & 191 Water-street, New-York.

AMERICAN AGRICULTURAL WAREHOUSE AND SEED STORE.

S. C. HILLS & Co, No. 43, Fulton Street, (removed from 189 Water Street) offer for sale, Prouty's Ploughs and Horse Rakes, Mayher's and Moore's Ploughs, Corn Mills, Corn Shellers—Catchpole's very superior Stalk and Straw Cutters, Hovey's do. do., Grain Cradles, Churns, &c. &c. Also, Garden and Flower Seeds. raised by the Shakers, and warranted good; Fruit and Ornamental Trees and Shrubbery, supplied on short notice.

June 1, 1848.—3t

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen. H. L. EMERY.

See the following *Certificate*.

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost. Clark Lewis, 2d.

German, Chenango Co.. N. Y., April 15, 1848.

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c. &c.

J. A. GIFFORD.

Hudson, May 9, 1848.—5t*

VIRGINIA LAND AND WATER POWER FOR SALE.

A FARM of 260 acres of highly improved, land with two water sites, 16 miles from Richmond, Va., on James River, is well adapted to the culture of wheat, corn, tobacco, oats and potatoes. The dwelling is spacious and has just been all put in complete order. and unsurpassed for beauty of position. There have been recently erected suitable buildings, barns, threshing machines, &c.; many springs of good water, well stocked orchard, good garden fences, &c. There are in the neighborhood two churches, post office, physician, and a saw and grist mill adjoining the premises. Also, a good and convenient market within a quarter of a mile, for all kinds of meats, fowls, vegetables, &c. There is a valuable coal mine working on the adjoining tract, and this property is estimated to abound in bituminous coal of first quality. Virginia lands can be purchased at 50 cts per acre, but the purchaser will remember he might as well settle in the interior of California. It is rarely such property is offered in market—it has the James River canal running through it, affording a cheap conveyance for all the produce. The situation is healthy and *truly beautiful*. The lands and proprietors in the neighborhood generally rich. It will be sold low, as the owner is compelled to sell. Apply to

J. B. DORSEY,
McCulloch's Buildings, New York, post paid.
June 1, 1848.—1t*

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.

Payable always in advance.

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BOSTON—Joseph Breck & Co., 52 North-Market-Street;
PHILADELPHIA—G. B. Zieber & Co., Booksellers:

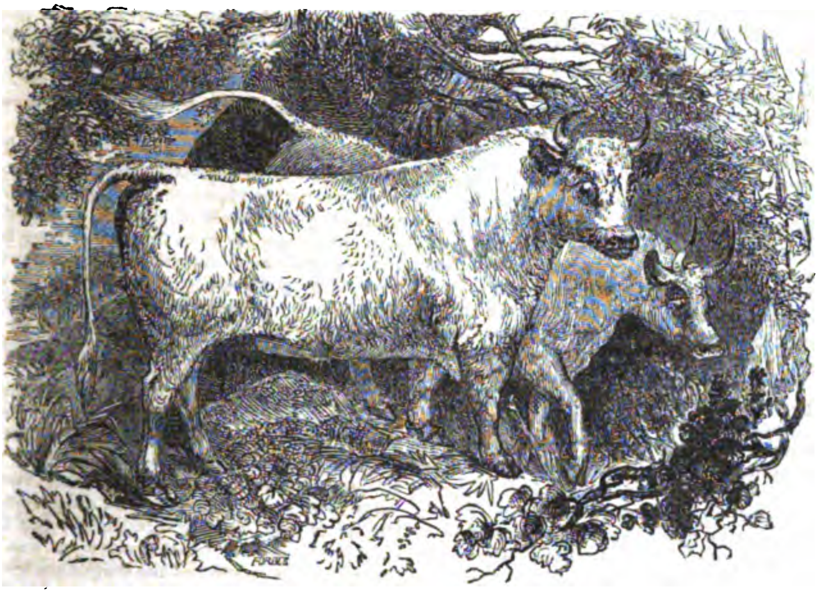
Of whom single numbers, or complete sets of the back volumes. can always be obtained.

☞ Advertisements inserted in the Cultivator, at the rate of $1 per 100 words, for each insertion.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, JULY, 1848. No. 7.



THE CHILLINGHAM WILD CATTLE.

The history of British Cattle is a subject of interest us, from the fact that they constitute the source from hich our own stock of the same species has been chief- derived. In investigating this history, we find that the time of the invasion and conquest of Britain by e Romans, under Julius Cæsar, fifty years before the hristian era, the ancient people of that country posses- d great numbers of these animals. Besides the large rds which were kept more or less in a state of domes- ation, and afforded support to the inhabitants by eir milk and flesh, many roamed unrestrained in the tensive forests.

The origin of these cattle has been a subject of much eculation. Whether the wild stock was really indi- nous to the country, existing there before it was peo- ed by the human race—whether the tame stock was rived from the wild—or whether the latter originally rung from a domestic race brought into the island by me of the early inhabitants, of whose origin and mi- ation we have no account, are questions which can- t be positively answered. At the earliest period to ich the history of Britain reaches, it is certain that n and cattle were found there, and we have good rea- n to believe, that the lineal descendants of both exist the pr[illegible] day.

Three distinct tribes or stocks of cattle appear to have existed in the British Islands, from the earliest times: viz. 1, the Long-Horns, which originally occupied the low flat lands of England, and similar parts of Ireland, and were remarkable for the enormous length of their horns, their bulky frames and thick hides; 2, the Middle-Horns represented by the cattle of Devonshire, Herefordshire, Wales, and the Scottish Highlands of which the wild stock of Chillingham Park, Northumberland, are considered the type; and 3, the Polled or hornless cattle, the originals of which are probably represented by the wild stock of Chatelherault Park, Lanarkshire, Scotland.

As we before remarked, there has been considerable discussion in regard to the origin of these wild stocks, and the relation which they sustain to the present domestic British breeds; but we are acquainted with no author who appears to have investigated the subject so deeply, and who has written upon it so elaborately as W. C. L. MARTIN, in his Treatise on the Ox, which forms the first part of a work now in course of publication, entitled "Knight's Farmers' Library, and Cyclopedia of Rural Affairs."

Mr. MARTIN first gives a very interesting description of the various extinct species of ox, the bones of which are found in various parts of the old continent, including Britain, and compares their characters with the races at present existing. He examines the idea which has formerly been entertained, that our domestic cattle, including the wild stock alluded to, are the descendants of the ancient Urus, a huge and fierce species of wild ox, which formerly inhabited the uncultivated districts of Europe; and he shows clearly that the present races are not only entirely distinct from the Urus, but from every other species of fossil ox which has hitherto been discovered.

Mr. M. is inclined to regard the Chillingham and Chatelherault cattle rather as *feral* than as originally wild, being in a similar condition to the semi-wild cattle of South America, which are known to have sprung from a tame stock, introduced and turned loose in that country by the Spaniards, soon after its first settlement. We think this opinion is based on very reasonable grounds. His principal arguments against the position that this is a wild species, naturally, are, that it "exists no where as a free denizen of the forest—is not found in the wilds of Central or Eastern Europe"—is only kept in England like deer, within the bounds of a park and that it is, beyond doubt, specifically identical with the domestic race, the ancestors of which, in remote times, are believed to have roamed over the whole of Europe and the adjacent parts of Asia.

Some of the circumstances connected with the position that these cattle were formerly emancipated from a domestic state, are given in the following extract:

"Let us remember that there was a time in which Western Europe received its first tide of colonization, and that at that time man possessed flocks and herds. When Cæsar landed on our shores, he found the Celtic tribes in the possession of the dog, the horse, the ox, and even the domestic fowl. Had they not carried these animals along with them in their early migrations, sedulously preserving them while they hunted down the wild and ferocious? We think so; the urus is extirpated; it was so in Britain in Cæsar's time; and the aurochs [Lithuanian wild ox or bison] is reduced to a few individuals, protected by imperial mandate. But the ancient Britons had tame cattle in abundance, and among these a white breed peculiarly valued; this breed was long maintained, and, as may be expected, principally in the mountain fastnesses, never entirely subjected to the dominion of the Romans, nor yet to that of the Saxon invaders."

Authorities are quoted showing that in the tenth century, some of the tame cattle in England were white with red ears, resembling those of Chillingham Park; and it is mentioned that on one occasion a person who had offended King John, sent to his queen a present of four hundred cows and a bull, all white with red ears. It is shown further that the same records which describe the white cattle with red ears, speak also of the dark-colored and black breeds.

Mr. MARTIN concludes, therefore, that in these old accounts, we have evidence of the existence of a valued breed of white cattle; and he remarks that "the descendants of these might, at various times, have become feral; that is, might have roamed in the wild forests, and returned to a natural state of independence; * * and of these feral herds, the Chillingham wild cattle may be the lineal descendants, if, indeed, not of the tame race once so much esteemed."

These views are strengthened by the fact that breeds similar to the Chillingham exist, (though not in a wild state,) in other parts of Europe. "In Italy," it is observed, "there is a noble breed of white cattle, the bulls being models of beauty; such indeed, as the sculptured figures of antiquity portray with spirit and fidelity. Herds of this breed graze in the wild solitudes of the Campagna of Rome, tended by vaccari, or herdsmen." It is from this breed that bulls are obtained to gratify the savage taste of the population, by the exhibition of bull-fights *

The characteristics of the Chillingham cattle are given by CULLEY, in his "Observations on Live Stock," as follows: "Their color is invariably of a creamy white, muzzle black; the whole of the inside of the ear, and about one-third of the outside, from the tips downwards, red; horns white, with black tips, very fine, and bent upwards; some of the bulls have a thin upright mane, an inch and a-half or two inches long. The weight of the oxen [not bulls] is from thirty-five to forty-five stone, fourteen pounds to the stone.—[490 to 630 lbs.] The beef is finely marbled and of excellent flavor. From the nature of their pasture, and the frequent agitation they are put into by the curiosity of strangers, it is scarcely to be expected they should be very fat; yet the six-year old oxen are generally very good beef; from whence it may be fairly supposed that in proper situations they would feed well."

Their habits are thus described by Mr. MARTIN:—"These cattle are extremely shy and savage; and at certain times the bulls are very ferocious. The cows conceal their young in the dense fern and underwood; and it is dangerous to approach the lair; for should the mother percieve the approach of an intruder, or the herd be alarmed by the bellow of the calf, an impetuous attack from the former, or even the whole troop is the immediate consequence. Formerly these cattle were hunted with all the pomp and circumstance of the chase in the olden time; but from the frequent occurrence of accidents, the practice has now been adopted of the park keeper selecting his individual, and striking it down with a well-directed rifle-ball."

The semi-wild cattle of Chatelherault Park, Scotland, (the *Bos scoticus* of some writers), are somewhat different in their characters from those of Chillingham. "These feral cattle," says Mr. MARTIN, "are larger and more robust than the Chillingham; the body is dun white; the inside of the ears, the muzzle and hoofs black instead of red, and the fore part of the leg from the knee downwards is mottled more or less with black; the roof of the mouth and the tongue are black, or largely spotted with black. The cows, and also the bulls, are generally polled or hornless." Those which are castrated generally have horns. Though dun is the prevailing color, it is stated that calves are sometimes dropped which are "off the markings," as it is termed, and in such cases the color is black, or black and white mixed. It is said the breed never shows but these two colors.

On comparing this stock with the Galloways, there is evidently considerable affinity between them, and it is not improbable that they had a common origin. In the latter breed the dun color was formerly not uncommon and is even now occasionally seen; while, as has been mentioned, the black sometimes appears in the wild stock.

There can be no doubt of the antiquity of the Chatelherault or Hamilton breed of cattle; both history and tradition inform us of a similar race which in remote times inhabited the forests of Scotland. They were hunted as "beasts of chase," and the noble, though somewhat perilous sport has been thus alluded to by SCOTT:

"Mightiest of all the beasts of chase
That roam in woody Caledon,
Crushing the forest in his race,
The mountain bull comes thundering on."

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* Dr. KNOX, in the ninth volume of the Scottish Quarterly Journal of Agriculture, gives it as his opinion that the Chillingham cattle are descended from an ancient Italian breed, introduced by the Romans.

"MANURES—THEIR NATURE AND ACTION."

The April No. of the Cultivator has been received, and I have perused the article on "Manures—their nature and action," by J. M. Ward. And I fully agree with him that "the right understanding of this subject is the foundation of all correct and profitable farming." And I frankly admit, that for many years I was of the same opinion of Mr. Ward, in regard to the very great value and importance to the farmer of the *nitrogen* in his manures. Impressed with this opinion, I have reasoned and talked to farmers of its use—I have written articles for publication upon this subject, and with a small box of "genuine Peruvian guano" in one hand, and a box of slaked lime in the other, I have lectured and illustrated to hundreds of farmers and others, of its great value for their growing crops, and the importance of fixing this volatile substance.

But by the force of numerous well attested facts, aided by study, practice, observation, and the application of the "sober second thought," I have been constrained to very greatly alter that opinion—in fact, to abandon it.

I have no favorite theory to advocate, no pride of opinion to sustain, only as far as truth will sustain me. I can, and do, most fully appreciate Mr. Ward's good and benevolent motives in giving his views upon this subject through the columns of the widely circulating Cultivator—his object was to further the great cause of Agriculture—to enlighten the path of the practical farmer—to point out to him a way to increase his profits by a more economical use of the means already within his reach. In giving my views so opposite to his—(for either Mr. W. or myself, are greatly mistaken in this matter.) I claim from him the same measure of charity, that I have meted out to him, in reference to motives.

I am well aware that M. Boussingault says, manure is valuable according to the amount of nitrogen it contains—and thousands of farmers, theoretical and practical, respond to it, as though it were a *fixed* fact.

Hence arises the *supposed* necessity and great importance of securing it in the manure heap, by the addition of dilute sulphuric acid—gypsum or sulphate of iron, (copperas) all of which substances possess the property of combining with the carbonate of ammonia a volatile salt, and converting it into a sulphate, a soluble, but not a volatile salt of ammonia.

I am also aware of the *absolute* necessity of nitrogen in the cereals—(grain,) and all other food, used for the sustenance of men and animals.

Ammonia is formed by a union of the nitrogen and hydrogen, in decomposing animal and vegetable matter—fourteen parts of nitrogen chemically combining with three parts of hydrogen.

If the advocates of that side of the question mean to be understood that the *nitrogen* in a given quantity, or quality of manure, is its most valuable part, I must beg leave to dissent from them—not in part, but in toto; and further say, that the nitrogen in manure is a substance of *no* consequence compared with the *inorganic* matters of the manure—and still farther, that as large crops can be grown without the use of nitrogenous manures, as can be with them, and I believe there is a vastly greater amount of Indian corn and wheat—(grains requiring much nitrogen in their composition,) grown in the United States, without the use of any kind of artificially applied nitrogenous manures, than there is by the aid of them.

But before proceeding farther, I wish to point out the analogy subsisting between the soil, the plant and the animal. Chemical research teaches us that some ten or eleven mineral or *inorganic* substances, enter into the composition of all naturally fertile soils. It further teaches us, that these *same* substances are found in the ash of plants, and it clearly establishes the fact, that plants derive their inorganic constituents from the soil, and upon the quantity, relative proportions and solubility of these substances in the soil, depends its fertility, rather than upon the quantity of what is generally termed the organic matter of the soil, viz. humus, vegetable matter, &c. And farther, analytical research has established the fact that the same inorganic bodies are found in the ash of the bone and muscle of animals, and that these same substances have been derived from the food upon which the animal subsisted.

Chemistry also teaches us that four elementary principles enter into vegetable structure, and hence are termed *organic* substances—they are carbon, hydrogen, oxygen and nitrogen. The three first are furnished by the atmosphere in sufficient quantity to meet the demand of the growing plant. To the above statements I feel sure of having Mr. W.'s assent. The nitrogen being the only question at issue between us.

His theory is, "that if we would obtain vegetable products *rich* in nitrogenised principles, we must surround the growing plant with animal or vegetable manures, containing an additional amount of these principles." Another is, "that one of the great problems for the agriculturist to solve, is how to furnish plants with the requisite nitrogen at the least expense"—and "that the *value* of manures in common use may be measured by the quantity of nitrogen which they contain, or their power of forming nitrates."

The above propositions of Mr. Ward, I believe, are wholly untenable, and were I not actuated by a desire to disseminate correct views in the cause of agriculture, I would never expend one drop of ink in attempting to expose their fallacy; and in order to more clearly elucidate my views, I must digress from the question at issue for a short time.

Chemical science has established the fact that vegetable food possesses a three-fold value—1st, bodies containing nitrogen, such as the gluten of wheat, the legumin of peas and beans, and in their chemical composition they are nearly identical with the muscle, lean meat of animals. 2d. Bodies containing no nitrogen, like the starch of the wheat and potato. 3d. Inorganic salts, all of which are serviceable in the animal economy.

"The nitrogenous bodies, from their solution in the blood, form the tissues, the actual organism. The bodies wanting nitrogen contribute by their more or less perfect combustion to the warmth of the animal body, and for the formation of fat; and the phosphoric acid and alkaline earths serve in building up the osseous frame work, besides constituting an essential part of every part of the animal system. Their values for the latter purpose are in proportion to the phosphates the ashes contain."

The nitrogenous and carbonaceous constituents of plants and animals are wholly derived from the four organic elements already named. The oxygen and nitrogen in a gaseous form, compose the air we breathe; oxygen and hydrogen, in certain proportions in a liquid form, compose the water we drink; carbon is charcoal, *dissolved*, or in a gaseous form combined with oxygen, and termed carbonic acid. These gaseous substances are susceptible among themselves, (and with the inorganic constituents of plants) of forming an infinity of chemical combinations, and of yielding an endless variety of products. 'Tis from the four organic elements that more than 99 pounds in a hundred weight of pine or fir wood are composed. 'Tis from these four substances that all the bulk of an elephant, or any other animal, is formed, that disappears when burned in the fire, and no human research has yet discovered any animal endowed with powers of assimilation sufficiently potent to convert into nutriment, carbon, nitrogen, and the other ultimate elements of animal substance. These elementary materials require the previous and more efficient action of vegetable chemistry; so thoroughly does it elaborate those elements, that little beyond solution and separation is required of the digestive functions of the higher orders of creation. It therefore follows, that animals cannot exist except through the instrumentality and intervention of plants. The soil might exist without the plants, the plants might live and die, though there were no animals to feed upon them. But the animal is, as it were, the creature and the consequence of both. The dead earth, the living plant, and the moving animal, are thus intimately connected.

From "the beginning" it has been decreed that man should obtain his bread by the sweat of his brow, but that *sweat* would have been unavailing, if it had also been decreed that man should have provided in manure the nitrogen his bread contains. Provision was made for this contingency, before "Adam delved, and Eve spun." And here the inquiry comes up, how has provision been made for this purpose? It has been reserved for modern chemistry to answer this question, and we find the answer in Prof. Horsford's letter, published in the Cultivator of July, 1847, in which he gives the amount of ammonia in a great variety of soils—not in pounds, but in tons. Something like an average of 8,000 lbs. avoirdupoise of ammonia in a stratum of one acre in area, and one foot deep. The "excavated earth" was taken from a depth below all traces of organic matter. The Illinois prairie soil was brought by a returning German, in paper, from a field that had been cultivated without manure for ten years, and this gave over three tons of ammonia, and the subsoil over two and a-half tons.

Prof. H. asks, "now what farmer ever carted from his manure yard 8,000 pounds of ammonia to an acre of land? One may almost say, what farmer ever carted one-tenth or one-twentieth part of this amount." He further says, "it is obvious that the amount of ammonia spread on fields in the ordinary distribution of barn-yard products, is of *no moment*. The quantity, with usual falls of rain, greatly exceeds in the course of a season any supply by human instrumentality. These results put the question of the *sources* of ammonia or nitrogen out of all doubt."

If plants are supplied with their requisite *inorganic* constituents, and with the right physical conditions, we may reap heavy crops of "highly nitrogenised products," without the aid of stable manure or guano. To sustain his views, Mr. W. cites the Prussian authority. I have no doubt of the different yield of produce by the different manures; but is there any more proof of this difference being occasioned by the ammonia, than there is of its being the result of the phosphates, and other inorganic salts in the manure.

He says: "the more liberal the use (of ammonia) the greater the yield." Petzhold, in his agricultural chemistry, gives the results of some experiments with various salts, and quantities of ammonia. These results seem clearly to contradict the above statement.

Prof. Liebig says, "the amount of nitrogen in manure is a measure for its amount of phosphates, and other mineral ingredients of the soil. Without phosphates, and without the other mineral elements of the food of plants, the *ammonia* exercises no influence whatever upon vegetable life." And Prof. Nesbit, of the Kensington agricultural school near London, makes the same remark. Now to substantiate the truth of some of the great principles laid down by Professors Liebig and Horsford, I shall adduce a number of well established facts, having a direct and positive bearing upon the question.

Several years since, Prof. Henslow of England, in order to test the value, (if any,) in fixing the ammonia in manure by the addition of gypsum, engaged some fifty or more farmers to institute a series of experiments for this purpose. Each experimenter was to make two compost heaps of manure and other materials according to a fixed rule, (by weight and measure) laid down by Prof. H. The only difference in the heaps one was to have the addition of a given quantity of gypsum, supposed to be sufficient to fix all the ammonia that would be generated during the fermentation of the heap. The two kinds were applied side by side, on various soils and a variety of crops, and the results were carefully noted.

The report* given by Prof. H. of the result, seems to leave the question wholly undetermined. His conclusions from these experiments—(fifteen in number) are given in this result. "It will be seen that with turneps the effect has been uniformly in favor of the gypsumed dung. With the straw of wheat the result is twice in favor of the gypsumed dung, once against it, and in one case, no difference. In respect to the wheat itself, it is six times in favor of the gypsumed dung, and six times against. The practical inference to be deduced from this part of the inquiry, favors the idea of using the gypsumed dung for a turnep crop, but shows that it produces no better effect than *ungypsumed* dung upon a wheat crop." [This certainly does not tell greatly in favor of ammonia in manure.]

In the *Gardeners' Chronicle*, May 11th, 1844, the editor gives the results of experiments obtained by a friend of his near St. Albans. The object of one of the experiments was to ascertain whether the expense of carting manures long distances could not be diminished by burning the manure and applying the ashes. The editor observes, if his experiments can be trusted, the results are of considerable importance, because it shows that stable litter burnt to ashes, is nearly as effectual as the common bulky manure.

The trial was made, as all trials should be, *on an exhausted soil*, consisting of a heavy loam. Turneps were sown on the 21st of June last, in drills 27 inches apart, and the space occupied by each experiment was exactly the same, viz: about the thirteenth of an acre.

	lbs.
No. 1.—No manure, gross weight of turneps,..............	68
No. 2.—Horse dung, 4 cwt., lime, half a bushel; the lime was slaked and mixed with the dung six weeks before it was put into the soil; this was for the purpose of driving off the ammonia. Weight of turneps,................	462
No. 3.—Horse dung, 4 cwt., sulphuric acid 2 lbs.; applied six weeks before it was put into the soil; this was for the purpose of fixing the ammonia. Turneps,............	444
No. 4.—Horse dung, 4 cwt., thrown into a heap six weeks before using,..	398
No. 5.—Horse dung, 6 cwt., same as above, do.,............	430
No. 6 —Horse dung, 8 cwt., same as above, do.,............	540
No. 7 —Horse dung, 5 cwt.; burnt to *ashes* with free access of air,...	[illegible]
No. 8.—Dung, 5 cwt., burnt with a very limited supply of air until the vegetable matter was burned into charcoal....	[illegible]
No. 9.—Dung, 5 cwt., sulphuric acid, 5 lbs.; mixed with the dung, and then carbonized like the last,................	417
No. 10.—No manure,..	70

The editor remarks, "If these results can be relied on, we shall come to the conclusion, 1st, that 5 cwt of stable litter when burnt, is as good as 6 cwt. of raw manure; and 2d, that after all that has been said about the importance of ammonia in manure, the crops are as good where that principle is driven off, as where it is retained by fixing."

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* Colman's Report on European Agriculture, vol. 1, part 5, page 418.

Prof. Nesbit, of or near London, gave a lecture before an association of farmers at Trying, England, a year or two since; [reported in *Mark Lane Express*, June 22, 1846;] in which he spoke of the importance of the inorganic or mineral constituents of plants, as found in their ash. A Mr. Dawe, a farmer present, confirmed it by saying, "I have found the ashes of burnt wheat very productive; I had a stack of wheat accidentally burnt, and I have used the ashes for manure; the consequence was, as good a crop as I could have had from guano." Mr. N. replied, "exactly so, in the burnt wheat you had all you wanted."

Liebig says, "the ash of the same species of a plant are the best manure for a crop."

At a discussion "Question," before the London Farmer's Club, as reported in the *Mark Lane Express*, of November 8, 1847: "What evidence is there that dung is deteriorated by drying, &c.," Prof. Nesbit led off the discussion, and from experiments in his laboratory made out a loss of one pound of ammonia per ton; the market value of the cheapest may be estimated at 1*s.* per pound—a loss to the farmer of 20*s.* per acre, if 20 tons are applied, if the manure is suffered to become dried. But he has not produced any evidence to show that ammonia is worth a shilling a pound for agricultural purposes.

A farmer present, a Mr. Cheetham, observed, "that without boasting, he could say, that few persons had been more successful in growing turneps than himself. For more than 22 years he had never sown twice nor missed a crop. He said "he was not able to enter into the various chemical questions connected with agriculture, or to discuss scientifically the benefits to be derived from *ammonia*, but he would mention a fact which seemed opposed to the notion of *ammonia* being of such very great importance as a manure." Some years ago they were short of manure; his father, who was then a farmer, bought some very old manure which had been lying scattered over a large surface at Stamford. This was turned over when intended for use, and there was sufficient moisture to cause it to ferment, yet at the time when it was applied to the land, it was in appearance little better than barley chaff. Notwithstanding its appearance, however, the crop of turneps was the most splendid that he had ever seen. He began farming in 1822, and having this example before his eyes, he determined using year-old manure.

In the *Mark Lane Express* of January 10, 1848, is a communication by Mr. Nesbit, on the recent discovery of an extraordinary amount of phosphoric acid, in some marl near Farnham, England. It has been observed wherever this marl came to the surface, the hops and the wheat grew almost without manure, and when applied to other lands, the fertility was remarkably increased.

This led Prof. N. to institute a series of most careful and rigid experiments, which resulted in proving the existence of about 5 per cent of bone earth, an extraordinary amount almost unparalleled in the natural or chemical history of soils. Ten tons of the dried marl would be an equivalent for a ton of bones. And bones have been long known as a valuable manure; a portion of their fertilizing properties *have been* attributed to their organic part, the oil and gelatine, as the last contains much nitrogen. Liebig, a few years since, announced that the good resulting from the use of bone manure, was due to the "bone earth," (phosphate of lime,) and not to the organic part, as generally supposed; this statement was received with disbelief by many. But many accurate experiments have established the fact, that burnt bones are quite as efficacious for manure, as those not deprived of their animal matter; and burnt bones contain no nitrogen. So, too, when he announced the great economy of dissolving bones in sulphuric acid, and forming the easily dissolved super phosphate of lime, so that 3 or 4 bushels of ground bones thus dissolved would be as efficient as 16 or 20 bushels applied in the ordinary way. This idea was ridiculed by many in England as a "bubble that would burst and be dissipated into air—into thin air." The truth of the above statements have been repeatedly verified, and are fully corroborated by Mr. Colman, page 364, part 8, of his European survey.

In the London *Gardeners' Chronicle* of April 4, 1846, is an interesting table of experiments by Prof. Daubeny with several kinds of manure, upon the turnep crop. But I cannot go into particulars. The result of his experiments proved that a given quantity of phosphorite, or natural mineral phosphate of lime, was as efficient as an equal amount of bones, and that 22 tons of *nitrogenous* manure per acre, gave but a few cwt. more of turneps than 12 cwt. Spanish phosphorite, entirely destitute of nitrogen. I could cite numerous other facts to prove my position, but I will come nearer *home* and adduce a few. I regret, however, that I shall from the length of this article, be obliged to treat them in a very summary way.

Many of the readers of the Cultivator are aware of the existence of a mineral substance found in New-Jersey and farther south, and known as "green sand," which possesses very valuable properties as a manure. It does not, so far as I can learn, contain any *nitrogen*, but it does produce very marked effects when applied in certain quantities upon the sandy lands of New-Jersey. And I wish I could get Prof. H. D. Rogers' glowing account of its effects "upon fields where the soil originally was nothing but sand." He says: "A Mr. Wooley manured a piece of land in the proportion of 200 loads of good (nitrogenised) stable manure per acre; by the use on the same kind of soil of 20 loads per acre of the green sand, the crops, clover and timothy, were much the heaviest upon the section which had received the marl. Difference in cost of manuring the land: stable manure $2.00 per acre, marling $5. "Land which had been sold for $2½ per acre, in consequence of the permanent increase in its fertility from the marl, is now worth $37 the acre." The great value is due to the potassa which it contains.

President Hitchcock, in his "geological survey of Massachusetts," devotes several pages of his valuable report to an account of a kind of marl found in different localities in Massachusetts, which he calls "muck-sand"—but frequently called quick sand. He gives details respecting the good effects of this quick sand, dug from many feet below the surface; and in some instances the good results lasted for 10 to 17 years, fully equal to the best stable manure in its immediate effects, and more permanent.

The great fertility of subsoils, and that dug from ditches, have been thousands of times noticed—even out-producing the most highly manured soils.

The Hon. Dixon H. Lewis, in some observations at a meeting of the New-York Farmers' Club last summer, stated the "best soil he ever had was that thrown out of ditches."

In the last September number of the Cultivator, Mr. Editor, in your "Sketches of farming in Western New-York," you mention the great fertility of the subsoil for several feet in depth, on Mr. Johnston's and Mr. Delafield's farms.

"That where ditches and drains had been dug, and the earth which had been taken out was spread over the surface, the wheat, barley and oats were heavier than in any other part of the field." In the present (April) number of the Cultivator, containing Mr. WARD's article, there is a communication from Mr. Dox, who mentions ears of corn, 22 inches long, grown on subsoil raised from a well, and "of some timothy or herds grass growing on a soil that was thrown out in digging a cellar, some of the heads of which were nearly 14 inches long." Now I do not believe, either the Wandering Jew, or Peter Rugg, in all their *travels* ever saw such ears of corn or heads of grass, grown by the aid of *nitrogenized* manures.

Where do the countless millions upon millions of bushels of corn and wheat grown upon the western prairies, obtain their nitrogen from? Not from the application of nitrogenised manures.

How has the fertility of the soil of Egypt been kept up from hundreds of years before Abraham's time, down to 1848 of the christian era? By annually having restored to it the finely comminuted mineral matters, (by the overflow of the Nile,) to replace those drawn from the soil by the annual crops.

Precisely thus, has the fertility of the alluvial lands on the Deerfield, (Mass.) river, been kept up for more than a century; and so upon others. I have named but few facts compared with what I could cite in this case—but enough to sustain my propositions. So here I rest the matter. LEVI BARTLETT. *Warner, N. H. April* 10, 1848.

"IRISH ROSE BUTTER" FOR THE U. S. NAVY.

In our last volume, pages 213, 284, some remarks are made in relation to the subject indicated by the above caption. The indefatigable Secretary of the New-York State Agricultural Society, Mr. JOHNSON, has taken hold of the matter, and has unraveled some of the mysteries with which the business of supplying Uncle Sam's navy with butter has hitherto been enveloped. The results of his investigations are published in the Society's *Transactions* for the last year, from which we gather the following facts.

The navy of the United States requires 60,000 pounds of butter annually. In the proposal issued by the department, it is said—"the butter must be of the description, quality and manufacture of the present navy butter, made in the mode of '*Irish Rose Butter.*' The milk must be thoroughly worked out, and the butter cleansed of all impurities, and extraneous substances, and be put up in seasoned white oak firkins, containing about 80 lbs. each, well and strongly hooped, so as to be perfectly air and pickle tight. Persons offering proposals are required to produce satisfactory evidence that their butter will stand the test of tropical climates, and preserve its sweet and wholesome qualities for years."

From this statement, it was deemed important to ascertain how "*Irish Rose Butter*" was made, if there was any such butter. The secretary therefore opened a correspondence with gentlemen engaged in the butter trade in Liverpool, and in various parts of Ireland. It appeared that most of these dealers never heard of "Irish Rose Butter," and that if any is now made under that name, which is doubtful, it is of a quality wholly unsuited to the navy, or for long keeping. A letter to the secretary from a house in Liverpool, says—"We understand that there is *Rose butter*, which is put up with very little salt, and is nearly as good as fresh butter, but *it is not fit for export.*"

No other intelligence was obtained concerning "Irish Rose Butter," except that a letter from Clonmel, in Ireland, stated that one of the Waterford houses brands, the firkins of their best quality of shipping butter with a rose. But this is not navy butter. That for the British navy is obtained from Cork, "where a larger quantity of salt is used in the manufacture, and where it is made up expressly for foreign exportation." This butter is packed in good tubs or casks, containing 66 to 70 lbs. each. "The quantity of salt mixed in the making of the butter, to be about one pound of salt to 10 or 11 pounds of butter, and the buttermilk to be well worked out of the butter, without using, however, the hand too much. In packing, care should be taken to pack it as closely as possible." In packing the butter, space is left at the top of the cask for pickle, and at the port of exportation, the pickle is added, with one or two pounds of salt additional, to each cask, to keep the pickle at full strength.

A letter from Clonmel describes the mode of making the celebrated "Irish butter" of that neighborhood, as follows:—"Our best makers have large, airy, cool dairies, and churn twice or three times a week, which depends on the heat of the weather. Caution must be used not to allow the cream to be too long in the tubs and pans, or until it gets sour, as the butter will then be inferior and what is termed *cheesy*. The buttermilk must be well washed out of the butter, and when salted, it should be packed *firm* into the firkin. These, with *great cleanliness*, are the principal things to be looked after in the manufacture, otherwise your butter will not keep its quality. The quantity of fine salt is three pounds to the firkin, containing about 65 pounds. The butter in this district is made expressly for the London and North of England markets; in the former, at certain periods of the year, it takes precedence of the Dutch."

But the Secretary has ascertained that notwithstanding the terms in the government *proposals*, that the butter for the U. S. navy, must be "made in the mode of *Irish Rose Butter*," not a word is said about such butter in the *contract!* In reference to this inconsistency, it is asked—"Why was this so drawn? Was it to prevent those who never heard of '*Irish Rose Butter*,' and knew not how it was made, from offering proposals? It is presumed it must have been inserted through inadvertence on the part of the person preparing the notices. But from whatever reason it was inserted, *its effect has been*, beyond all question, to *prevent* persons from offering proposals, who might otherwise have done so."

It has been proved, as we learn from the paper under consideration, that the butter which has been furnished under the proposals alluded to, has usually been what is called "Orange county butter," and it is said "the gentleman who has special charge of this department, is of opinion that *no butter made out of Orange county* will resist the action of tropical climates and preserve its qualities for years."

As the quantity of butter required for the supply of the United States navy on foreign stations, is not less than 60,000 pounds annually, and is continually increasing, the question is considerably important, whether all this butter must be made in the county of Orange? What are the *peculiar* qualities imparted by the territory encompassed by the boundary lines of that county, that it should be entitled to such pre-eminence? It is admitted that soil, climate, and quality of herbage have an influence on butter; but can the county of Orange claim any special advantages of this kind? It is admitted also, that a large portion of the butter produced in Orange county is of excellent quality; but the question is simply, whether the same skill and attention which is there given to the manufacture, will not or does not produce equally as good butter in other counties ? Evidence enough is already obtained to answer this question affirmatively.

The inquiries instituted by the Secretary of the Society, clearly establish the fact "that a very large portion of the butter marked 'Goshen' [and sold as such] in the New-York market, is actually made out of Orange county;" and, as is observed, it is but justice that credit should be given to the counties where it is made. From the information given by several of the most extensive dealers in butter in New-York, it is found that "there is hardly a county in the State" from which some excellent butter is not obtained. But the Secretary's correspondence shows that from the counties of Chemung, Broome, Chenango, Tompkins, Tioga, Delaware, Sullivan, Ulster and Greene, large quantities of butter are annually obtained of a quality equal to that made n Orange county—that a large portion of it is in fact sold by dealers as "Orange county butter." It is only marked "Orange" or "Goshen" to conform to certain prejudices. One large dealer says:—"The butter made in the county of Chemung is equal to that made n Orange county, and will stand the *southern climate* as well. Also, that made in Tompkins county, is well suited for shipment south, and *stands the salt air as well as any butter we receive here.*" I find that western dairies sell as well as the best 'Goshen butter,' *when sent south*, and in *many cases better*, as it has more color."

Another dealer who, we are told, has an establishment in New Orleans, to which he has been in the practice of sending butter from Western New-York, speaks of the butter from several dairies in Chemung county, which he states has been "sent south," and stands the climate equal to any from the Orange county dairies, and fetches as high a price as any from that county.

Another speaks of a dairy in Chemung, the butter from which for the last fifteen years, has not sold for less, with one exception, than eighteen cents per pound, "and for the most part has brought from twenty cents to as high as twenty-eight cents" for the whole quantity made. He adds:—"there are several dairies in the county that bear the same high character, and *will compare, to say the least, with the best that Orange does, or ever has produced.*"

Now the great fact to which all this information points, is, that good cows, good pastures, good water and good air, with an observance of proper rules in the management of milk and cream, will insure good butter, whether the dairy is located in the county of Orange or elsewhere. In regard to pastures, it may be observed, that rather elevated situations, affording "fine sweet grass and cold springs," would be preferred. Fortunately, in our extensive country, districts which possess all the natural requisites for the production of butter and cheese, are neither few nor small. Both of these departments of husbandry are becoming every year of more importance, and when we consider the great demand which exists for dairy products of prime quality, and the great difference in the price of such and those of inferior or ordinary quality, it certainly behooves all engaged in the business to aim at perfection.

MEMOIR OF THOMAS GREEN FESSENDEN.

BY F. HOLBROOK.

Editors of the Cultivator:—The plan adopted n the Cultivator, of giving a short record of the life and character of men distinguished as friends of the farmer, by their able efforts in the promotion of agriculure. meets my cordial approbation; for as you have ightly said,—"the exhibition of such examples canot fail to exert a salutary influence on society." We may all learn from the life and labors of such men, that he Agricultural profession is not, as has too generally een supposed, a *menial* employment, but one affording ull scope for the exercise of the best intellectual powrs. And we further see, strikingly exhibited, the fallacy of the sentiment so generally indulged, that farmng is a sort of stereotyped business, long since brought o perfection; and that all we have to do, is to follow he practices handed down through a long line of anestry. unaltered and unimproved, regardless of all light licited either from the developments of science, or englitened practice.

Among the distinguished laborers in the field of agculture, no one is worthy of more honorable notice han our respected and lamented friend, THOMAS G. ESSENDEN, for fifteen years editor of the *New-England Farmer*. The limits afforded in your journal are ecessarily so circumscribed, that we shall not be able o present more than a very brief sketch of the life and haracter of our friend; but though brief, it shall be the ibute of admiration for his amiable and generous naure, and respect for his many and valuable public serces. Biographical sketches of Mr. FESSENDEN were ritten soon after his decease by N. HAWTHORNE, Esq., nd Mr. COLMAN, to each of whom we are indebted for he principal data of this sketch.

THOMAS GREEN FESSENDEN was born in the year 771. at Walpole, New-Hampshire, and was the eldest nine children of the Rev. Thomas Fessenden,—a man of distinction in his profession, and long settled in the ministry at Walpole. His early education was such as the district school of those days afforded. He soon evinced those habits of inquiry and close application which so much distinguished him in after life, and rendered that life so valuable to the agricultural world. His active and inquisitive mind turned to the best account the facilities afforded by his father's library, and so rapid was his progress in study, that, at the early age of sixteen he became himself the instructor of the village school. Most of his time in the summer months, however, was given to labor on his father's farm towards the support of a large family, in moderate circumstances. His dexterity and efficiency in the use of the scythe. in his younger days, was a matter of much honest pride with him in after life; and it was his frequent custom for several years after he left the paternal roof, to spend the haying season with his father, assuming the brunt of the labor himself.

Soon after the age of manhood, Mr. FESSENDEN entered Dartmouth College, where he supported himself by his own industry, without calling upon his father for assistance. This was done mostly by the wages earned in teaching district schools, and classes in sacred music, during the winter months. He was equal to the performance of any of the sacred music of those days, playing one part very efficiently with his bass-viol, and carrying another with his voice; and it was immaterial which part, he being always ready to sustain the weakest.

In his "Jonathan's Courtship," a truly original effusion produced while in College, we have early evidence of that witty and humorous turn which, a few years after, was the source of so many fanciful sentiments and poems. He was remarkable too for his satirical humor, and he possessed a singular combination of the strange and ludicrous; and yet it was evident to all who knew him that his satire was wholly free from hatred or ill-will, and that it was impossible for a heart so generous as his to indulge any feelings of this kind.

Mr. Fessenden graduated at Dartmouth, in 1796, and entered upon the study of the law at Rutland, Vt. with that eminent practitioner, Nathaniel Chipman, Esq., with whom he afterwards formed a connection in business. He was not in his proper element however, in the practice of law, for his ruling taste for literary and scientific pursuits, and his childlike simplicity of character, poorly qualified him to succeed in a profession where shrewdness and tact are so essential.

In the year 1801, a company of mechanics who were interested in some newly invented machine, employed Mr. Fessenden, to go to London for the purpose of obtaining a patent. After arriving there it was found that the machine was destitute of sufficient merit, and his journey proved a fruitless one. He found himself a pennyless and friendless stranger in that great city, thrown entirely upon his wits for a support; and here those qualities of satirical humor before mentioned soon afforded him a resource. He became acquainted with one Perkins, the patentee of the famous Metalic Tractors, which were represented as performing the most marvelous and extraordinary cures of various diseases. This humbug had gained considerable favor with the people, although stoutly opposed by the professional corps. At the request of Perkins, Mr. Fessenden made it the subject of a Hudibrastic poem, entitled "Terrible Tractoration," which, for its satirical and strangely ludicrous humor, was much applauded, and won the author quite a reputation. "The poem," says his friend Hawthorne, "professes to be a poetical petition from Doctor Christopher Caustic, a medical gentleman who has been ruined by the success of the Metalic Tractors, and who applies to the Royal College of Physicians for relief and redress. The wits of the poor Doctor have been somewhat shattered by his misfortunes; and with crazy ingenuity he contrives to heap ridicule on his medical brethren, under pretence of railing against Perkinism. The poem is in four cantos, the first of which is the best, and the most characteristic of the author. It is occupied with Dr. Caustic's description of his mechanical and scientific contrivances, embracing all sorts of possible and impossible projects; every one of which, however, has a ridiculous plausibility. The inexhaustible variety in which they flow forth, proves the author's invention unrivalled in its way. Long afterwards, speaking of the first conception of this poem, the author told me that he had shaped it out during a solitary day's ramble in the outskirts of London; and the character of Dr. Caustic so strongly impressed itself on his mind, that, as he walked homeward through the crowded streets, he burst into frequent fits of laughter." This poem ran through several editions at that time, and a revised edition, with a new satire upon the men and things of the day, was published by the author, in 1837.

In the year 1804, Mr. Fessenden returned to New-York city, and soon after commenced the publication of the "Weekly Inspector," a paper chiefly of a political character; he also published a book, entitled "The Register of Arts." He afterwards removed to Philadelphia, where he was engaged in literary pursuits, and published his humorous poem, "Pills, Poetical, Political and Philosophical, by Peter Pepper-Box, Esq., Poet and Physician;" and also his satirical poem, entitled "Democracy Unveiled."

In 1807 or 8, he removed to Brattleboro, Vt., where he had two brothers residing, and edited with much ability, "The Brattleboro Reporter," a weekly and miscellaneous newspaper; and afterwards, at Bellows' Falls, Vt., "The Intelligencer," a paper of like character. Here he published "The Clerk's Companion," a book of legal forms; an enlarged edition of "Deane's New-England Farmer," a Dictionary of Agriculture; and "The Lady's Monitor." He was also continually called upon for New-Year's poetical addresses, Fourth of July Odes, &c., &c., and was somewhat engaged in the practice of his legal profession. During his residence in Vermont, his attention was considerably directed to agriculture, and he wrote upon the subject for his paper. Here, his hitherto eventful life and ever-varying fortunes became more settled and prosperous; and in the year 1813, he formed a most fortunate and happy connection in marriage. Mrs. F. was of all others, the person of most desirable qualities to make the life of such a man useful, prosperous and happy. Aided by her excellent judgment and care, the earnings of his persevering labors, resulted in a comfortable independence for their declining years.

Here, Mr. Fessenden won the affection and esteem of all who knew him, by the simplicity and amenity of his manners, his generous and frank nature, and his strict integrity. His application to study was untiring; he never had a moment for idleness, and his memory being remarkably retentive, there could be hardly a subject of importance started in conversation, with which he was not more or less familiar. He was remarkable for his good nature, and many are the sallies of his wit, remembered by his friends. His generosity of heart knew no bounds. The following little incident illustrates his utter thoughtlessness of self, when this quality was called into exercise. When he first removed to Brattleboro,—an entire stranger to most of the inhabitants—he took a morning walk, and coming to the toll-bridge, found there a poor family whom the gate-tender had stopped for the want of money. Mr. F. at once emptied his pockets of all the change he happened to have and let them through, passing along with them. On his return he found himself in a like situation, and it was not without some parleying and explanation that he succeeded in getting through.

In 1822, Mr. Fessenden was called to Boston, as editor of the *New-England Farmer*, a weekly journal devoted to agriculture. He edited this paper for fifteen years, or until his death, which occurred November 13, 1837. In this time he also published his "Complete Farmer," his "American Gardener," and edited the *Horticultural Register* and *Silk Manual*. His labors during these years were most assiduous and untiring; it being his habit to devote no less than sixteen hours of the twenty-four to study. As conductor of the *New-England Farmer*, he achieved the crowning labors of his life. The paper had an extensive circulation throughout New-England, and may be said to have "fertilized the soil like rain from heaven."

To this day, we turn over the pages of that journal with admiration for the research those labors evince, and for the great amount of valuable information the volumes afford. As an example of the vigorous yet facile style of his writings for the *Farmer*, we quote the following truthful remarks from his "Acknowledgments to Patrons and Correspondents," at the close of the 12th volume:

"We may, perhaps, be allowed to state that our predilections to the art of all arts, increases in a direct proportion to the attention we bestow on it; for like every thing else possessing intrinsic excellence, the more intimate the acquaintance, the more obvious are its merits—the more we explore the avenues of culture the stronger the perception that its ways are profitable as well as pleasant, and 'all its paths are peace.' And, indeed, the world is apparently now becoming practically impressed with the primary importance of those pursuits which feed and clothe the human race; and to which we are indebted for all which makes life a blessing, or gives civilized a superiority over savage existence."

At the close of another volume he says:—"We are highly gratified in perceiving that the interest which attaches to the primitive and most important of the arts is every year perceptibly increasing in zeal, knowledge and perseverance. If we still continue thus to press forward, we cannot fail in the common course of events to become not only prosperous as individuals, but powerful, respectable and respected as a nation. Improvements in agriculture are pioneers, heralds and companions of all other improvements. The accurate science and correct practice of tillage alone can precede and introduce the charms, the decorum, the dignity as well as the substantial and indispensable requisites of civilization. If Ceres[*] did not sustain the Graces, as well as support Minerva[†] and her retinue, they would disappear, as the tints of the setting sun fade in the sky when evening advances."

During a residence of several years in Vermont, in later life, Mr. **Fessenden** added much practical knowledge of agriculture to that acquired in his youth; and this, combined with his thorough and extensive acquaintance with all the writers of merit, on practical and scientific husbandry, and his perfect readiness of pen in imparting all the information upon any subject in hand which could be elicited from books, fitted him admirably for his editorial duties. This paper had the patronage and support of men of the first intelligence and influence throughout the New-England States, and it is not perhaps too much to say, that no other single agent contributed so much to the advancement of a more enlightened practice in husbandry, as the *New-England Farmer*.

Many are the pleasant visits we have enjoyed at the house of our kinsman and friend. However tired and worn down with his numerous labors, he ever became cheerful upon entering his quiet and happy home; and we always expected some sally of his wit during these hours of social life. He had a great fondness for sacred harmony, especially the wild and stirring fugues of Billings, Holden, and other early American composers; and seating himself at the table of a Sabbath evening, with bass-viol in hand and his young friends around him, would lead off in fine style, carrying with his voice any part we assigned him, and feeling, apparently about as young as any of us. He was peculiar at times, for his absence of mind, and it was not unusual for us to pass him in the streets of Boston so deeply absorbed in study, as to be wholly unmindful of the world around him.

Mr. **Fessenden** had the confidence and friendship of a wide circle of intelligent and influential men in Massachusetts interested in the promotion of agriculture, and he is still remembered by them with sentiments of affection and respect. Those sentiments have been beautifully expressed in the following extract:—

"On the 13th day of November, 1837," remarks Mr. Hawthorne, "while on my way to Boston, expecting shortly to take him by the hand, a letter met me with an invitation to his funeral. He had been struck with apoplexy on Friday, three days before, and had lain insensible till Saturday night, when he expired. The burial took place at Mount Auburn on the ensuing Tuesday. It was a gloomy day, for the first snow storm of the season had been drifting through the air since morning; and the 'garden of graves' looked the dreariest spot on earth. The snow came down so fast, that it covered the coffin in its passage from the hearse to the sepulchre. The few male friends who had followed to the cemetery, descended into the tomb; and it was there that I took my last glance at the features of a man, who will hold a place in my remembrance apart from other men. He was like no other. In his long pathway through life, from the cradle to the place we had now laid him, he had come—a man, indeed, in intellect and achievement—but in guileless simplicity, a child. Dark would have been the hour, if, when we closed the door of the tomb upon his perishing mortality, we had believed that our friend was there!"

"It is contemplated to erect a monument, by subscription, to Mr. **Fessenden's** memory. It is right that he should be thus honored. Mount Auburn will long remain a desert, barren of consecrated marbles, if worth like his be yielded to oblivion. Let his grave be marked out, that the yeomen of New-England may know where he sleeps; for he was their familiar friend, and has visited them at all their firesides. He has toiled for them at seed time and harvest; he has scattered the good grain in every field; and they have garnered the increase. Mark out his grave, as that of one worthy to be remembered both in the literary and political annals of our country; and let the laurel be carved on his memorial—stone—for it will cover the ashes of a man of genius."

This design has since been realised, by the erection of a marble monument, bearing the following appropriate inscription:

"**Thomas Green Fessenden**, died Nov. 11, 1837, aged 65. This monument is erected by the Massachusetts Society for promoting Agriculture—by the Horticultural Society of Massachusetts—and individuals, as a testimony of respect for the literary talents and acquirements of the deceased, and his untiring labors in promoting the objects of the above institutions."

We close with the following tribute from the Rev. W. B. **Tappan**, written a few days after Mr. F.'s burial.

"THOMAS GREEN FESSENDEN.

Mount Auburn, as a miser, gathers wealth
From the world's heap; not artfully, by stealth,
But shamelessly and open. Sits he now
Alone in winter's drapery, his brow
Circled by solemn trees; and contemplates
His gains, and those to come with which the Fates
Shall swell his hoard, already rich with store,
We knew not how to part with. Yet one more
Is added. Moral excellence and wit,
Talents not idly hid, worth that would sit
Gracefully on a king, the crown adorning,—
These have been stolen, this violence hath our mourning.
Yet, Plunderer! there's hidden in thy womb
Nought but the casket, which at trump of doom,
Thou—saith the oracle of God—shalt render,
The jewel lodged above! who'll tell its splendor?"

To kill all Weeds.—The leaves are the lungs; no plant can grow if it cannot breathe; and if it is prevented from breathing, it must soon die. Some persons dig for feet into the soil to eradicate roots; a much easier way, is to keep the tops buried, by repeated plowing, or by a thick coat of tan or sawdust. Elders and willows may be very easily killed without grubbing, by merely keeping them closely cut to the surface, and pulling off all the sprouts as they appear. Cut them off in the spring or early summer, burn the brush upon the stubs, and then remove the sprouts during the season, and the work is completed.

Training Oxen.—It is well to learn oxen the art of *backing*. Begin with an empty cart on a descent; then on a level; then with a gradually increasing load; then uphill. Cattle may in this way be taught to back with facility a heavy load.

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[*] The goddess of Agriculture.

[†] The goddess of Wisdom and of the Liberal Arts.

SKETCHES OF FINE FARMS.

Having lately had an opportunity of spending a few hours at some fine places in Dutchess county, we submit a hasty and necessarily imperfect sketch of some of the objects which met our attention.

The farm of J. W. Wheeler, Esq., of Hyde Park, consists of 300 acres. It has been in his possession for five years, but at the present time about 200 acres are rented. The natural situation of the place, on the east bank of the Hudson, is very pleasant, and Mr. W. has done much to improve and beautify it. His buildings are tasteful and neat; his grounds are handsomely laid out, and mostly enclosed with stone walls of the best kind. It is designed that all the outline fences shall be of stone, and that the few internal ones which are necessary, shall be of iron.

The soil of Mr. Wheeler's farm, generally, is of rather a loose texture, somewhat gravelly in places, underlaid by slate rocks. It is well suited to the production of Indian corn, rye, and most kinds of fruit common to the latitude—especially apples and pears. There is a large number of pear trees, and we have never seen finer or more healthy ones, or those that were better set in fruit.

The principal products of the farm are fruits, Indian corn, rye, potatoes and hay. The grain is chiefly used in fattening beef—the other articles are sent to the New-York market. Most of the cattle to be fattened, are commonly purchased in the fall, fed through the winter, and sold the following May or June. Oxen are employed in farm labor. They are at all times well fed, and not being over-worked, they get in high condition, and with only a little extra feeding, are turned off for beef at good prices. Mr. W. showed us six handsome and well-fattened oxen, which had been sold to be taken away in the month of June, at an average of a hundred dollars each—estimated equal to nine dollars per hundred for the nett beef, or four quarters.

All the stables and stock yards are constructed to prevent the waste of any portion of the excrement, liquid or solid. Large quantities of good manure are made by the stall-fed cattle and other animals, and it is all carefully saved and applied to the land in the most judicious manner. The yards are kept covered with muck and litter, and the manure is made up into compost heaps, where the decomposition is so regulated, and the gases so absorbed, that there is no loss of fertilizing elements. It is commonly applied to hoed crops, and is thoroughly incorporated with the surface-soil.

Mr. Wheeler has some Ayrshire, and some Durham cattle. He prefers the former for the dairy. He has two Ayrshire cows and a bull which were imported, and several young animals of their produce. They are good stock. Only one of the Ayrshire cows had a calf the past spring. This one ("Effie,") and a "Dutch" heifer were put on trial together, for butter, for a few weeks, and the two yielded from twenty-two to twenty-three and a-half pounds per week. Few cows, of any breed, carry more good points for the dairy, than the Ayrshire last mentioned.

We were highly pleased with the good order, neatness, and the general evidences of good management displayed on the premises of Mr. Wheeler, and regretted that circumstances did not permit us to make a longer stay. It was also with much regret that we were compelled to forego the pleasure of a visit to the fine places of Mr. Fuller, Maj. Allen, and Mr. Butler, all situated in the same neighborhood.

From Mr. Wheeler's we passed up the river bank to Ellerslie, the residence of Wm. Kelly, Esq., near Rhinebeck. This place, consisting of about 600 acres, has been in Mr. K.'s possession about seven years. In its original purchase and subsequent improvement, he has made large expenditures, and whether considered in reference to its natural position and features, or the embellishments of art, there are but few places of equal beauty and interest. The mansion stands on elevated ground, but is flanked on the north and west by beautiful woods, which effectually screen it from the boreal blasts. The prospect to the south is delightful, embracing a view of the river and country on both sides, for the distance of nearly twenty miles.

The appearance of the grounds is highly attractive. On one side are extensive carriage ways and walks, leading for miles through groves and forests, and taking in their course points from which we have the finest park-like views; while on the other side, lie broad green fields, whose gently-varied surface presents to the eye a rich and extensive rural landscape.

The farm is divided into lots of from fifty to a hundred acres, and where a division of these lots becomes necessary, moveable iron fences are used, which, as they cannot be seen at a distance, preserve, unbroken, the view of the grounds. The soil is mostly a clay loam, more natural to the production of grass than grain. Gypsum operates favorably, and by the use of this article every year or two, and occasional top-dressings, with compost, a great portion of the farm is kept constantly in grass. A large field was shown us which had not been plowed for upwards of thirty years, and it had a stout crop of excellent quality. The herbage of the pastures is likewise much improved by moderate dressings of plaster. Hay is the principal product of the farm, of which it yields from 300 to 400 tons annually, mostly sent to the New-York market.

Considerable live-stock is, however, kept on the farm, and in this department Mr. K. has spared neither pains nor expense to obtain the best. We saw sixteen cows, full blood and grade Durhams, all of which were *good*, and several of them *uncommonly fine* both in points and dairy qualities. Among the herd was a very fine imported Ayrshire cow—"Kitty."* Mr. K. showed us some very promising young stock of various ages, and several yoke of staunch working oxen. A pair of nearly full blood Durhams were of large size, and apparently of great strength.

Mr. K. has a flock of about sixty South Down sheep, several of which he procured from the best flocks in England, at a cost, in some instances, of two hundred dollars per head. Many of them are of first rate quality, and show that they have been bred with care and judgment.

Mr. K. has shown great liberality in the distribution of such of his fine animals as he could spare, among the neighboring farmers, at prices not higher than would have been paid by the butchers.

The old out-buildings of the farm are in good order, but not in all cases of the most approved style. Mr. Kelly is erecting on different parts of the farm, several spacious barns for storing hay; and next season he designs to take down the barns where the cattle are kept, and put up others of the most convenient and substantial kind, in their stead.

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* This cow has since been purchased by E. P. Prentice, Esq

PARING AND BURNING.

Paring and burning the soil, as a means of increasing its productive powers, has seldom been practiced in this country. The reason may, perhaps, be, that in our older settled districts there is not a very large proportion of the kind of land which is most benefited by the process; while the cheapness of new lands has offered such inducements to improvement as tended to check expensive outlays on the old.

But we are satisfied that paring and burning may be practiced with good results in many situations, and that it would prove a profitable mode of improvement. The soils most suitable for this process, are those containing a large proportion of inert vegetable matter, combined more or less with clay. But on all soils overgrown with pernicious plants, paring and burning, if properly performed, may be successfully practiced. It not only effectually kills all living vegetation within two inches of the surface, but destroys the greater portion of the seeds which infest the soil. We have seen fields covered with couch-grass, (*Triticum repens*,) Johnswort, wild turnep, &c., rendered very clean for several years, and made to produce fine crops of grain, grass, or root-crops, by the course alluded to.

We find in a late number of the *Farmer's Magazine*, an excellent paper on the subject of paring and burning, the most important portions of which, with some additional suggestions, are condensed in the following article.

The method of paring and burning consists in paring with a spade or plow, the surface of any lands that are covered with a coarse and overgrown foggage or brushwood, into pieces not exceeding two inches in thickness, and afterwards drying and reducing them to ashes by burning. The operation is most conveniently performed by men with spades made for the purpose, which are formed with a thin blade of about one foot in length, terminating in a sharp point; and the left side of the blade is provided with an upright coulter, which cuts the slices in a straight line, and they are turned off to the right hand side by a twitch which the man gives to the implement. The handle or shaft is about seven feet in length, with a curved bend rising to the upper end, on which is placed a cross-hilt about two feet in length, by which the workman holds the implement and guides the process of cutting. The implement is so constructed that the spade lies nearly flat on the ground, when the hilt rests against the thighs of the workmen, which are guarded by boards or by pads of wool fastened on straps while he propels the implement through the tough surface.

Various kinds of implements to be worked with horses or oxen have been constructed for the purpose of paring the soil; but by none of them can the work be so effectually done as by manual labor, and there are but few situations where the hand plow would not on the whole, prove most advantageous.

The cost of paring and burning, varies according to the price of labor, and the condition of the land on which the operation is to be performed. The expense for paring alone, in England, is set down at an average of 20*s*. or about $5 per acre, and the cost of burning and spreading the ashes at the same sum. It will be seen, therefore, that it is only where land and produce are comparatively dear, that the process would prove remunerative. But in the vicinity of our large markets, it is by no means uncommon to incur a much greater expense per acre for manure alone, than would be required for paring and burning.

Paring may be done at any time from spring to autumn The turfs are exposed to the sun and air with the earth side up for a few days, and are then set on edge by bracing two pieces together. If the weather is favorable, the slices will soon be ready for heaping; which is performed by placing any combustible materials on the ground and piling the turf over them until a heap of moderate size is formed, when the fire is applied below. A smothering fire is much preferred, and the outside of the heaps should be kept so close that the flame does not burst out. In some cases the sods are piled in large heaps, and in others in small ones, only a few yards distant, but in either case the fire should be kept close. Small heaps, when the turf is so dry as to burn readily, incur less labor and expense both in piling and spreading the ashes. The quantity of ashes is on an average about 2,000, bushels per acre. In dry seasons, and where the pared surface is light and fibrous, or covered with vegetation, the sods may be burned as they lie on the ground, without being heaped: and good pastures have been formed by sowing clover and grass seeds on the ashes, without plowing, where no useful grass or plant had before appeared.

After the sods are burned, the ashes are to be spread, and it is recommended to allow time for cooling them before the land is plowed, which is usually done with a thin furrow, and rendered fine by harrowing before the seed for a crop is sown. It is preferred to keep the ashes near the top of the ground, for the purpose of affording immediate nourishment to plants.

But though the immediate effects of paring and burning are generally admitted; the practice is opposed by many on the ground that it lessens the vegetable matters of the soil. This objection is answered by stating that it is not a destruction of the vegetable matter that is sought, but only a *charring* or torrefying of the materials exposed to the fire—violent burning being carefully avoided. In opposition to the opinion that the staple of lands is reduced by this operation, and that sterility ensues, may be quoted the authority of many of the most eminent cultivators, who burned the surface of their calcareous, silicious, and argillaceous soils in succession, and at no great intervals of time, and have always reaped great advantages, and never perceived any detriment, but a great improvement accrue to the land.

Green cropping with sheep feeding, was regularly followed, and dung and composts occasionally applied; and the land being thus improved was invariably laid down to rest with a sowing of good perennial seeds, and depastured for several years with sheep. On soils of better quality, the rest in grass would not be so necessary; but a duly enriching process of cropping must be adopted to afford the animal and vegetable matters to the soil on all improved and cultivated lands that contain the vegetable matter in a reduced and tender form, and in a finely blended and comminuted state.

The great advantage in burning consists in land producing by that process a manure for itself, and in producing crops for the future acquisition of that indispensable article. The opponents of burning nowhere give the system of cropping, and the future management of the land that is said to be reduced to a state of barrenness by that process, nor is there anywhere detailed a comparative and decisive proof of the inferiority of paring and burning to the mode of fallowing and rotting the surface on lands or fields of similar quality, and which have been subjected to the same treatment after improvement, nor the expense and produce of each mode from the breaking of the old turf till the land was laid out to grass. The great part of the controversy rests on mere matter of opinion, and a more fallacious mode of judgment cannot be adopted than to condemn any practice from the results of imperfect performance; for if strictly followed, it would condemn many of the most approved and useful practices in life; and anything that can be effected to good purpose by others, must not be disallowed by those who are incapable of the execution and unwilling to be taught; nor must they allow their avarice and prejudices, narrow judgment and want of energy and exertion to give a limit to the capacities of other men who may see more clearly and can act more vigorously, and who can bring more judgment and discrimination to bear on the point.

Scientific men have reasoned from very obscure causes in regard to the effects that result from paring and burning land; it is thought that clay imbibes nutritive properties from the atmosphere, and that carbonic acid, which in combination with iron is injurious to plants, is expelled by burning. But in the present state of our knowledge of these subjects, we may very properly refer the effects to a diminution of the coherence and tenacity of clay soils, and to the conversion of inert vegetable and other matters into active manures.

But the formation of charcoal may perhaps be reckoned the chief benefit, and some persons have added the oxygenation of the clay by the heat emitted, and also the mechanical effect of the fire in dividing and attenuating the soil; but as the process is above ground and of short duration, and the under-soil is unmoved much effect may not be produced that way. But it has ever been observed that vegetation is very luxuriant on the places where the heaps are burned, and where no ashes are allowed to remain on the ground. *There* the cause of fertility must arise from the effect of the fire; and the best ashes that could be found on a field have been carried and spread on pared ground where no ashes had been burnt, and they produced effects much inferior to those on the places where the burning had been performed and the ashes subsequently spread. It has been most judiciously observed that there is a cause or agent in burning, and that a most powerful one, "which escapes the retort of the chemist and the *rationale* of the theorist."

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

SUMMER APPLES.

A considerable number of new or newly introduced varieties of the apple have excited the attention of fruit growers, and to furnish the information which is often sought by those but little acquainted with them, we subjoin short descriptions of a number with a statement of their qualities. Figures, with full descriptions of some of the finest will be given during the season.

Garden Royal.—A roundish, even and regular, red striped apple, the stem slender, and calyx large and open, and both but slightly sunk. The flesh is very tender, of fine texture; moderately juicy, and of a very slightly sub-acid, pleasant flavor. It is not so rich as the Benoni; nor quite so acid,—is more regular in form, not quite so much of a yellowish cast, and duller in color. It promises to be a fine addition to our list of early apples. It is a native of Sudbury, Mass. Very productive.

Early Joe.—A figure and description of this excellent variety, was published in the Cultivator last autumn. It undoubtedly stands at the head of the list of all moderate sized mild-flavored apples. It is much smaller than Williams' Red,* but evidently superior to it in quality. In texture, it considerably resembles the Summer Rose. The growth of the young trees is slow —the tree a most abundant bearer, the branches being sometimes literally hid by the trusses of fruit, without diminishing its fairness or quality. Its origin was in East Bloomfield, in Western New-York.

Red Astrachan.—This very showy foreign apple, although it has attracted considerable attention, is only known to a limited extent. It is rather large, often quite large, roundish, slightly flattened and remotely conical, a fine deep brilliant red, with a slight bloom. It is a fine grower, good bearer, and ripens only a week or two after the Yellow Harvest. Were it of fine quality, it would therefore perhaps stand without a rival, but it is rather coarse in texture, and austere in flavor. It will doubtless prove valuable as a market fruit, where fine appearance often eclipses quality.

Early Buffington.—Apple medium in size, and ripening about the time of the Sine Qua Non, or two weeks after the Yellow Harvest. It is rarely equalled when well ripened, in its fine texture and excellent sub-acid flavor. It is flat, obscurely ribbed, with a short stem, skin very smooth, clear light yellow, often with a brownish blush; flesh yellowish white, very tender and delicate, and compact. It is decidedly superior in quality to the Yellow Harvest and Summer Rose, and and is perhaps only equalled by the Early Joe. It is however, a moderate bearer, which lessens its value. It is believed to have originated in the vicinity of Philadelphia.

Vedder's Pippin.—Medium in size, flat, somewhat ribbed, light greenish yellow in the shade, but nearly covered with bright red stripes, dots and clouds; stem short, thick, flesh white, delicate, profusely juicy, with a pleasant and excellent sub-acid flavor. Though not so rich in flavor as some, it is decidedly first rate in quality, and is an abundant bearer every alternate year. First brought to notice in Cayuga county, N.Y. It ripens near the end of summer.

Bevan's Favorite.—This apple was first described in Hoffy's Orchadist's Companion, a few years ago, and very highly commended; but it was either greatly over praised, or else is sadly degenerated in Western New-York. After three years' trial in bearing, we cannot place it higher than second rate. It is a very handsome red-striped apple, but only moderate in flavor, and too hard ever to be pleasant.

Remark.—Erroneous conclusions relative to the real merits of new varieties, are often drawn by those who receive specimens of the fruit from a distance. Those of mild flavor, as the Early Joe, Garden Royal, and Hawley, which often lose a part of their flavor by a conveyance of several hundred miles, are considerably diminished in excellence, and their real character thus remains unknown. On the other hand, those of the too acid flavor, as the St. Lawrence, Red Astrachan and others, are rather improved than injured by lessening their acidity.

(To be continued in next number.)

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*Generally regarded as one of the very best summer apples.

Experiments with Copperas on Sickly Foliage.

The day after the receipt of the Cultivator, which contained some statements relative to the beneficial effects of a solution of sulphate of iron, (copperas,) on morbidly yellow foliage, I made a preparation of the salt by dissolving 1 drachm in a gallon of rain water. I say *rain* water, for some hard waters, as lime stone water, will rapidly decompose the sulphate, and make the experiment less satisfactory. This solution I sprinkled over about fifty strawberry plants at one application; and the next day, and the day after, I applied the same amount to them, and waited for the result. Twelve days have now elapsed, and much of that period has been very rainy. The soil of the bed is composed of rotted chips, leached ashes which contained lime, and pig-pen manure. Soon after transplanting the vines, the leaves began to fade to a sickly yellow; some, indeed, became almost white, and some plants died. All these morbid effects I would have ascribed to the soil, had I not discovered that some plants left in a former bed of ordinary garden earth, where they last year were healthy, had assumed more or less of the same yellow hue.

A day or two after the last application of the solution, the ground became obviously of a yellowish brown color, from the decomposition of the sulphate of iron. The rains probably interfered much with any effects which the immediate application of the solution to the leaves may have otherwise had; at the same time that the copperas, (180 grains in all,) by those very rains was more likely to be washed down within reach of the roots, than in a dryer state of the atmosphere.

Again, I took up one of the worst plants which had not been treated with the solution; and after washing off all the soil from its roots, potted it in common garden soil. This case was a desperate one, for the plant had but six leaves, not half an inch long, and nearly white. Call this No. 1. Another plant, stunted and with yellow leaves, was dug up, washed, and placed in a solution of several grains of copperas, in two oz. of water, and left for four or five hours; and then common earth was added to absorb the solution, and in this slush it has been left till now. Call this No. 2. A third dwarf plant, with decidedly yellow leaves, was treated similarly, except that the soil added to the solution in which the roots were immersed, was taken from the strawberry bed in which the sickly plants grew. All these pots have been almost constantly drenched by the rains alluded to, and have had the benefit of but little sun; if, indeed, under the circumstances, the sun's strong rays would have been beneficial. Now for the results:

The fifty plants treated with the solution, have now, at the expiration of twelve days, assumed a considerably greener hue than those of the other half of the bed which were left untouched, for the purpose of comparison; and to determine whether any change which might take place in the experimental plants, might not be due to the coincidence of other agencies as the weather, or the recuperative powers of the plants. The difference in the two halves of the bed was very perceptible to three persons, who were not informed of my motive for requesting their judgment, until they had expressed it. Their judgment was not biassed.

In plant No. 1, now, after eight days, there is no striking change.

In No. 2, there was a decided improvement in five days, the leaves becoming of a lively green color, which they still retain.

The third plant has been but three or four days under trial; but it is now perceptibly improving in verdure.

I will remark, by the way, that a young walnut tree (Juglans nigra,) two young coffee bean trees, (Gymnocladus canadensis,) two Catawba grape vines, and one Elsinboro' grape vine, all of which were transplanted into the bed in which my sickly strawberries are, (except the walnut, which came up from a nut planted there,) are in a thrifty condition, while two or three Cassia marylandica plants, some parsley, onions, &c., transferred to the same bed, have some of them perished, while others remain stunted.

I shall continue my experiments as occasion calls for them, having received encouragement enough to do so, from the results of the foregoing trials with the solution of copperas. JNO. T. PLUMMER. *Richmond, Ind., 5 Mo. 22nd,* 1848.

The Orchard—Renovation of old Trees.

MESSRS. EDITORS—Among the many visible improvements which are progressing with railroad speed, at the present time, the cultivation of improved varieties of fruit is beginning to be felt as a matter of growing importance. The *change* which has taken place in public feeling, in regard to this subject, is truly wonderful and agreeable. Let us look at the contrast which a few years furnish in this particular. Formerly apple orchards were scattered abundantly over the country, but what were their products? They yielded just such fruit as nature inclined them to yield. Not one tree in fifty, probably produced anything agreeable to the taste, while the stomach rose in utter rebellion, against their unsavory and sickening qualities. Consequently, public opinion in those days very nearly coincided with that of a certain squaw, who said "what fools Adam and Eve were to eat the apple from the forbidden tree! For her part she would much rather have it made into cider." Our apples, unpalatable to man, and almost obnoxious to beasts, were made into cider. Every cellar was furnished to overflowing with the article, and what could not be stowed at home, was taken to the distillery, and manufactured into brandy, a portion of which was returned and placed by the side of the cider casks for the future use of the farmer.

The temperance reform came, and a new and more cheerful feature was given to this state of things. Distilleries were seen going to ruin, because farmers would not furnish them with the raw material for the manufacture of *blue* ruin; and even distillers, many of them men of conscious integrity, saw the wrongfulness of manufacturing an article of such fatal consequences to the human race, were glad to close the fountains that poured out streams of liquid fire and death.

A serious difficulty arose, however, at this point of the passing state of things. The fruit was, for the most part of an inferior quality;—its value for stock had not been learned, and therefore could not be appreciated, and consequently, what trees existed, beyond the necessary number to furnish fruit for family use, were, in too many instances, deemed fit only for the wasting fire. Consequently, it was not unusual to see whole orchards nearly destroyed root and branch, to give the land to what was then considered, more valuable purposes.

Here our farmers committed an almost inexcusable error. Had they waited only a year or two, until the value of apples, both for stock and market, was fully determined, and then grafted these trees which were prematurely doomed to destruction, with choice varieties of fruit, they would not only have added an increased value to their estates by adopting a new means of increasing their "annual revenue," but have conferred a benefit upon others who would have become partakers of the luxury their fields afforded, almost too great to be appreciated.

The value of apples for domestic animals is being more and more appreciated. Horses, horned cattle, swine and geese, are all ready to test their excellence, as articles of food; and man finds in them a *healthful* and agreeable luxury. Their *value* increases with their excellency and keeping qualities. Of course, the very *best* varieties are the best to raise for every purpose.

It has become a prevailing opinion with some, that their orchards are *too old*, ever to experience any renovating influence, consequently, they are not worth grafting, and the only way for them is, to put out new trees and let the old ones pass away.

It is certainly a very good policy to set new orchards, and every farmer who has none but old trees, "the early settlers," should be about it with all diligence. But do not despise or neglect *the old trees*. If they have become scrubby in the top, prune with all care. If the bark has become rough and dry with age, sccrape it, and if in doing this, you reach the *live bark*, no harm will result. If your orchard has long been in grass, and your convenience will permit, plow and manure, and raise one, two, or three crops of potatoes or corn. If it is not convenient to plow, make a compost of chip manure and common earth, and put a load of this under each tree. Or, if you saw your wood, or burn your chips, use the earth alone, and a good effect will result from it. Apply it as often as you can; if every year, the result will be better. In proof of the utility of doing this, we furnish the following facts:

In the autumn of 1837, in opening an excavation in search of iron ore, the laborers dumped the earth taken from the pit on descending land on which stood several apple trees. We saw them doing it, and looked upon those trees as killed, an anticipation which gave us but little uneasiness, as they had for several years been unproductive, or, if they have borne at all, the fruit was so small and knotty that it was deemed of little value. The carting and dumping process was continued until the earth (earth of no great vegetating power, as all must know who are conversant with the earths and ochres of an iron mine,) was raised around those trees to a height of from twelve to eighteen inches. Contrary to our wise calculations that those trees would die, in the spring of '38 they put forth a rich and beautiful foliage, and although not remarkable for their fruit, they gave a fine growth of wood that season. In '39 the trees were amply laden with fine, fair fruit, increased in size, and improved in quality, from the slight, insignificant productions of former years. These trees have continued annual bearers until the present time.

From this casual experiment, we took a hint, and have already resuscitated several old apparently worthless trees by the method we have prescribed. In '47, particularly, we experimented upon a tree which formerly produced a delicious, sweet, early apple, and, although we applied but one load of chip manure and common earth, mixed in about equal parts at the time of application, which was before the tree blossomed; The effect was surprising. The tree threw out many new shoots, and produced more apples than it had done for many successive years.

The rationale of scraping the old bark lies in this. It becomes dry and compact on the surface, and thereby hinders the expansion of internal parts, so that the sap circulates sluggishly, and hence the vital energy of the tree is checked so as to render it nearly worthless, if its destruction is not complete. This old bark may all be taken off with perfect safety to the inner layer, but in doing this, the greatest care should be used not to penetrate that in the least. After scraping the bark, wash the tree as you would a young tree, with ley, and in a few days you will see the bark assuming a youthful, vigorous appearance. If the wash be repeated often, no injury will result. It cleanses the bark from impurities, keeps the pores open and free, and effectually destroys all insects that seek shelter there.

Thus much for renovating old trees,—a thing to be desired until new ones can be raised in sufficient quantities to supply the increasing demands for fruit. But no farmer should place reliance upon them for a long period. Age will sweep them away at last, after all efforts to stay its progress. The next generation will need new and larger orchards. Every farmer, therefore, should set himself about raising a new orchard forthwith. We say *raising*, for in what way can a farmer get a hundred apple trees easier than to sow the seed, tend them, and graft them himself. The labor of this is trifling, and if he does it, he will be pretty sure to know what his trees are, whether they are grafted on whole roots or only *pieces of roots*, and can consequently determine much better whether his trees will be trees. He may also know with more certainty than can always be possessed, what the varieties of his trees are. This he may undoubtedly know in purchases from most of our nurseries, but mistakes sometimes occur in this as in other business, for more than once it has been our misfortune to purchase a tree bearing high recommendations, and doubtless valuable *somewhere*, which to us was utterly worthless. Soil or climate may have made a difference, but had we taken scions from some known valuable variety in our own neighborhood, our disappointment would have been remedied, our money saved, and our lost labor turned to good account. Y'rs respectfully, Wm. Bacon. *Elmwood, April*, 1848.

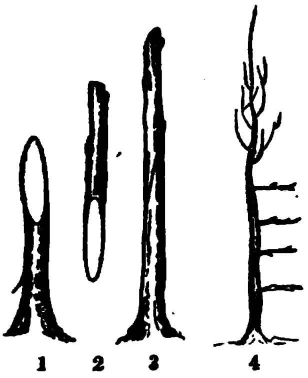
Experiments in Grafting.

Several correspondents have favored us with the results of their experiments in grafting, which we believe will be acceptable, in a condensed form, to many of our readers.

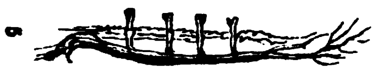
E. M. Hoyt, of New-Haven, Vt., gives the following statement of a successful mode of raising a small nursery of apple trees for his own farm:—In the spring of the year, I enrich plentifully with manure a piece of ground near the house, so as to be often under my eye. I then proceed to the orchard or yard where my cattle have been after eating apples in autumn, where I find in their scattered manure apple plants in their second and third leaf. These are removed with the adhering manure and placed in rows. They grow vigorously and require careful weeding, particularly the first season. The second spring many may be grafted, but I usually wait till the third spring, when the plants are two years old.

My grafting process is simple, and if well performed, sure of success.

Being provided with scions, procured in February from trees producing the varieties I desire, also with a quantity of strong brown paper, thinly coated with common grafting wax, the paper being cut into pieces, two by four inches, I cut off the tree obliquely, about 6 inches above the surface of the earth, thus leaving an opportunity in case of failure, to regraft below. I then select from the scions, with which I had previously provided myself, one of nearly a corresponding size, and take off about four inches, including at least two buds. This I match on to the stock, so that the bark of the two parts, shall generally come in contact, then holding them firmly pressed together, wind the paper-plaster around the splice with the wax side inward, drawing it very closely. This work should be done on a sunny day, so that the wax will adhere closely, as it is wound twice or thrice around. Rub a little extra wax around the tree, both on the upper and lower edges of the plaster, to exclude rain, &c. This plaster is all the ligature required as the union soon becomes perfect. After the scion sends forth its shoots, all starting sprouts below the splice, should be removed. As to the precise time for grafting, there seems to be some discrepancy of opinion; but I prefer that time when the buds are swelling. Still, I have met with success when the leaf began to develope itself.



The two parts should lap on each other about an inch and a quarter. That the shape of the splice may be understood by all, the annexed drawing is furnished; fig. 1, representing the stock; fig. 2, the scion; and fig. 3, the two united before the wax plaster is applied."



Grafting into layers.— The following mode, altho' not wholly new, in some cases may be found to possess advantages over other modes, where stocks may be scarce.

Take a stock of two or three years old from the seed, split it with a sharp pointed knife, about once in three or four inches; whittle off your scion wedge-shaped. and stick it at right angles through the stem. Apply wax and bandage, bend down the stock and confine it in a trench three or four inches deep; cover up with earth, leave one bud of the graft above the surface, and it is done. Three years since I first thought of and practiced this plan. Nearly all the scions took and grew finely. The spring following, I divided the stock with a sharp knife between each graft and let them stand. This spring I transplanted them, found them perfectly sound where they passed through the stock, and finely rooted. From 100 stocks, you can have from 300 to 400 thrifty grafts—quite a saving of labor and time. A. B. Price, M. D. *Boon Grove, Porter Co., Indiana, March*, 1848.

Fig. 4 shows the appearance of the stock and graft, and fig. 5 the same after the stock is bent down and laid in the earth.

Corrections.

In the last number of the Cultivator, an experiment is given in the interesting communication of our correspondent at Utica, where he attributes certain results to the *mixing* or crossing of the seed of beets and carrots.

The experience of scientific horticulturists has established certain limits to the power of crossing in plants. This process usually takes place between varieties of the same species, as one variety of the apple with another, or one melon with another. It also takes place, in some instances, between certain species of the same genus where they are *nearly allied*, producing a *hybrid*. Species widely different in nature are not capable of crossing. The pear and the apple, for instance, and the gooseberry and the currant, although species of the same respective genera, have never been known to intermix. Now, the carrot belongs to the natural order Umbelliferæ, and the beet to the natural order Chenopodea; they are not only of distinct genera, but of totally distinct natural orders; hence the ruin of the seed in the experiment alluded to must be ascribed to some other cause.

Our Flushing correspondent has fallen into quite an error, in classing the "seventeen year locust" among "visionary tales." This locust is at this moment swarming in myriads in a large part of western New-York, after a distinct interval of seventeen years; and we could, if necessary, furnish at least one hundred good certificates that this is the third appearance, after like intervals, in this part of the country. The fact cannot be overthrown, however difficult the explanation may be.

Time for Pruning Orchards.

D. Sinclair, jr., writes from Cape Island as follows:—"My objection to pruning in the winter is, the frosty winds dry and crack the wound; if delayed till May, the sap would keep it alive till grown over. I have for several years pursued the business of grafting in Canada and the States, and have seen trees that were pruned in the winter on the decay, while those of equal size pruned at another season, were healed. I use a moist and durable composition, bearing the changes of the weather, and will cover the wound until grown off. It consists of—

Beeswax,	1 lb.,
Tallow,	¾ lb.,
Rosin,	4½ lb.

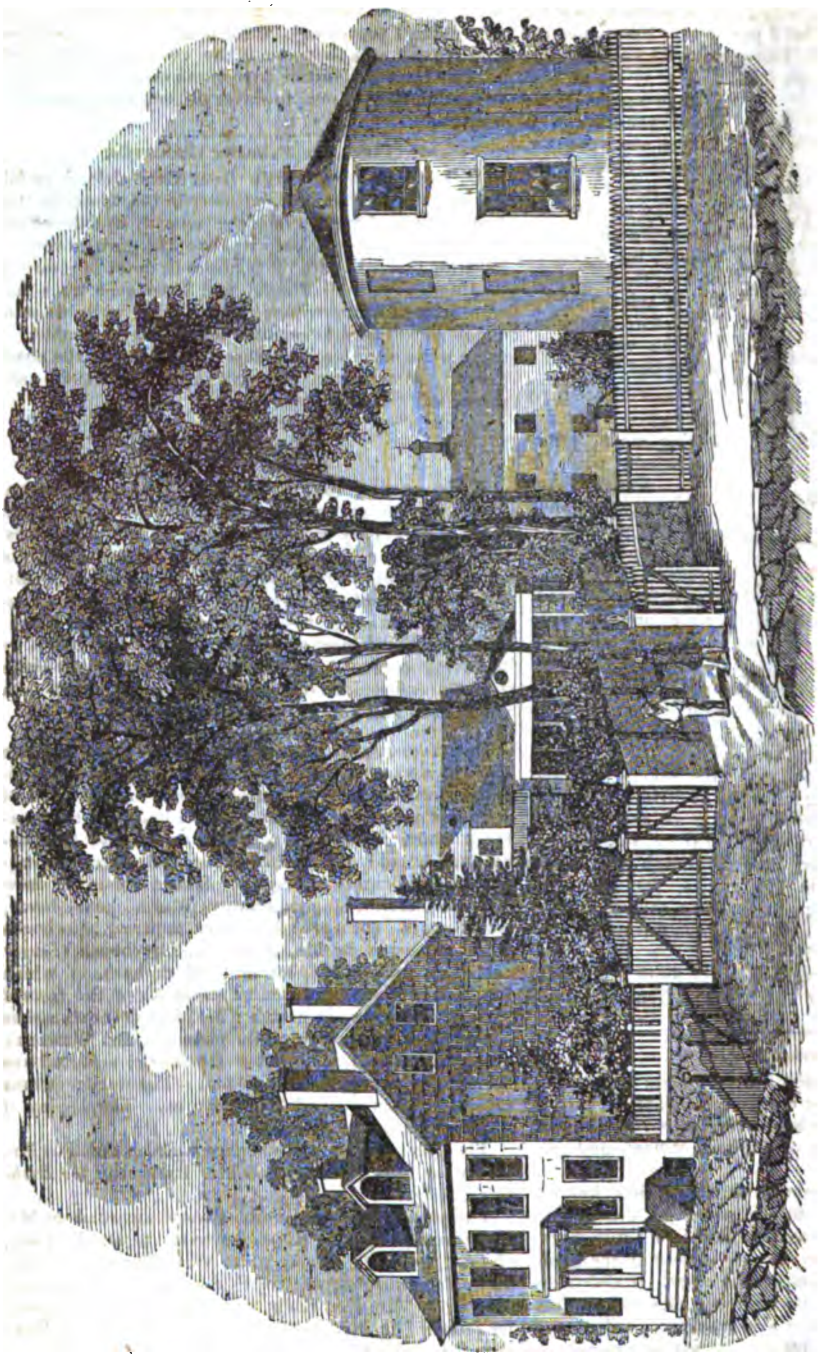
Early summer pruning would, doubtless, be advantageous in several respects, but it usually happens that it is a very busy season with nearly all cultivators. There appears, however, to be no objection to late winter pruning, if the wounds are protected by a suitable water-proof covering: a good and cheap one consists of a mixture of tar and brick dust applied warm; or a better and more expensive one may be made by dissolving as much gum shellac in alcohol as will make it of the consistance of paint, to be kept corked in a wide bottle and applied with a brush.

Horticultural Exhibition.—The first exhibition (for the season) of the Albany and Rensselaer Horticultural Society, was held in Albany on the 14th of June. Considering the unfavorable nature of the weather, which for several weeks previous had been unseasonably cold, the display of fruits, flowers and vegetables, was highly creditable. There was a fair show of strawberries, of good quality; also of peas, beets, cauliflowers, (of the latter very superior specimens were presented by Mr. Douw, of Greenbush,) early cabbages, cucumbers, lettuce and rhubarb, of which Mr. James Wilson presented six stems of the *Hybrid* variety, weighing six pounds; Mr. Prentice six stems of the *Victoria*, weighing four pounds. Dr. Wendell presented a vegetable, called *Hooshung*, said to have been lately brought from China. The tender stems are eaten when cooked as asparagus. The display of roses, picotees, &c., was fine.

The premiums on strawberries were awarded to Mr. Douw for *Ross Phœnix*, and Mr. Prentice for *Bishop's Orange*.

The premiums on vegetables were awarded to Mr. Prentice, of Mount Hope, for *beets*; to D. T. Vail, of Troy, for early *cabbages*; to V. P. Douw, of Greenbush, for *cauliflowers*; to F. Kiesel, of Albany, for *celery*; to Mr. Douw, for *cucumbers*; to F. Kiesel, for *lettuce*; to Mr. Douw, for *peas*; to James Wilson, for *rhubarb*.

The premiums on flowers were awarded to Dr. H. Wendell, of Albany, for a *centre-table bouquet*; to Mr. Prentice, for a *bouquet*; to James Wilson, for a *flat bouquet*, and also to the same for a *round bouquet*; to Joel Rathbone Esq., for two *basket bouquets*; to D. T. Vail, *for centre table bouquet*; to Wm. Newcombe, of Pittstown, for a *flat bouquet*; to John Wilcox, for a *floral design*; to Jas. Wilson, for best exhibition of *roses*, and to the same for the best twelve varieties, and the best six varieties of *roses*; to Joel Rathbone, for best six varieties and best three varieties of *pinks*; to V. P. Douw, for best collection of *pæonies*; and to J. Rathbone, for *fuschias*.



MOUNT AIRY AGRICULTURAL INSTITUTE.

JOHN WILKINSON, ESQ. PRINCIPAL.

GERMANTOWN, NEAR PHILADELPHIA.

It was announced in our number for February last, that Mr. Wilkinson, the Principal of the Duchess Agricultural Institute at Poughkeepsie, had made arrangements to remove his establishment to *Mount Airy*, the well known residence of the public spirited James Gowen, Esq., where the summer term of the Institute was opened on the first of April last. No better location could have been found for such an establishment; and we hope Mr. Wilkinson will find such an appreciation of the importance of his labors, on the part of the public, as will abundantly remunerate him for his devotion to the cause of Agricultural education. [See advertisement.]

Manure *in* or *on* the Soil.—J. P. Downey, before the N. Y. Farmers' Club, detailed the following experiment. Land was plowed nine inches deep and the manure spread in the bottom of each furrow during the operation. On another piece, the manure was spread after plowing and well harrowed in. On the ground where the manure was deeply buried, the corn was 20 per cent heavier.

This result is erroneously ascribed to the *ascent* of the buried manure. Manure nearly always remains in the soil just where it is put, except where the soluble parts are carried off by the currents of water beneath the surface, or where the volatile parts pass off by being too near or at the surface. In the above mentioned experiment, the roots of the corn extending several inches downwards, were conveniently fed by the manure buried in the furrow, while the rest of the crop only received the benefit of the surface manure while the plants were very young and the roots short.

A Bale of Cotton is 400lbs., no matter how large or small the bundles may be in which it is taken to market.

THE FARMER'S NOTE BOOK.

Houses of Unburnt Brick.

I have lately been requested by many persons to write an article for the Cultivator on the construction of buildings of unburnt brick. I therefore send you the following, the result of my own experience.

In the summer of 1844, I purchased a piece of land for a nursery, and wishing to build a house to correspond with my business, I concluded to build of unburnt brick, several of the kind having already been erected in the vicinity, which had given good satisfaction. Mine has proved to be warm in winter and cool in summer. The walls are never damp, and there is every indication that it will be durable—more so, at least, than the *clap-board wind castles* which a person meets with every few rods, through the country.

My process for making the bricks was as follows: A circular pit, ten feet in diameter was dug, two feet deep. A floor of inch boards was laid over the bottom, and the pit filled with clay, and a small admixture of sand. Water was then added sufficient to moisten the batch. It is better to let the clay soak over night, if it is convenient, as I found it worked much easier. When all was prepared, a pair of oxen were driven into the pit, turned to the right, and driven about till the clay became soft and free from lumps. I then cut six bundles of straw, into lengths of about six inches, and scattered over the clay, keeping the oxen moving moderately at the same time, till the clay and straw were thoroughly mixed together.

I then placed a table, four feet square and three feet high, by the side of the pit, and with the help of a man, proceeded to mould the bricks. The moulds were made of pine boards, nailed together like a box, but made very smooth on the inside. The dimensions on the inside, were fifteen inches long, one foot wide, and six inches deep. Cleats were nailed on each side of the mould, to lift them by when filled. Two moulds were used alternately. The moulds were wet, sprinkled with sand, and placed upon the table. The clay was then shovelled from the pit and thrown upon the table. The clay was taken by the hands, filling the corners of the mould first—dashing it into the mould to make the bricks solid. When the moulds were full, they were stricken off even with the top, with a straight edge board to make them even. They were then placed upon a wheelbarrow and taken to the ground previously levelled and sanded, where the moulds were carefully inverted and lifted from the brick, leaving them to dry in the sun. As soon as the bricks became sufficiently hard they were turned on one edge, which exposed both sides to the air. They were afterwards placed in layers five feet high, under cover, till they were fit to be placed into the wall.

In laying them in the wall, I used clay mortar, mixed in the way as the clay for the bricks, omitting the cut straw. It is necessary in laying the foundations for buildings, to elevate them well above the ground, so that no moisture reaches the bricks from below, and no base should project to impede the running off of the water. I would here state that an aperture about a quarter of an inch wide should be left in each end of the bottom of the moulds, to admit air, as the bricks adhere, without such a precaution. The space could be left by making the bottom of the moulds too short to cover the whole length. The moulds should be washed as often as every third brick is moulded, on account of the soft clay adhering to the sides and bottom.

I offer my house for the examination of any laboring man. It is now covered to the eaves with roses in full bloom, and other climbing plants, forming an object of attraction to the passers by. ISAAC HILDRETH. *Seneca, June 1*, 1848.

Proper Stage of Cutting Wheat.

The proper time for cutting wheat is a subject which has been considerably discussed, and in regard to which there is probably still some difference of opinion. Many experiments have been made in England, in order to ascertain at what stage the crop would afford the greatest profit. The results all point to an earlier period than has formerly been thought best for this operation. Mr. COLMAN made very particular inquiries of the best farmers and millers in regard to this point. He states as the result of his inquiries, that "the best rule for harvesting, is not when the stalk below the head has changed color, and the circulations have consequently ceased, but when the grain, though it has ceased to yield any milk upon pressure, is yet soft." So far as trials have been made in this country, they are not at variance with the above, and some of our wheat raisers have now adopted the rule of beginning to harvest while the grain is *doughy*. The advantages of cutting at this stage have been briefly given as follows:—"Wheat cut early, affords more grain, yields less bran, makes better flour, shells less in harvesting, wastes less in gleaning, gives better straw, and enables the farmer to do the work more leisurely."

It may be interesting to notice with attention some of the experiments which have been made in cutting wheat at different times. In the 12th and 13th volumes of the Scottish Quarterly Journal of Agriculture, Mr. HANNAM has given the details of several very particular and careful trials made under his own direction. In one instance he cut samples of wheat at five different times, as follows:

No. 1, was cut a month before fully ripe.
" 2, " three weeks " "
" 3, " two " " "
" 4, " two days " "
" 5, " when fully ripe.

Of these lots, 100 pounds of the grain of each yielded as follows :

No.	Flour.	Seconds.	Bran.
1	75 lbs.	7 lbs.	17 lbs.
2	76	7	16
3	80	5	13
4	77	7	14
5	72	11	15

Thus it appears that No. 3, which was cut two weeks before it was fully ripe, was superior to the other lots; giving more per bushel than No. 5, (cut when fully ripe) by 6½ pounds of flour, and a gain of about 15 per cent. on the flour of equal measure of grain: 100 pounds of wheat of No. 3, makes 80 pounds of flour, while 100 pounds of No. 5; yields 72; showing an average of 8 per cent. in favor of No. 3. In grinding, it was found that No. 5 ground the worst—worse than No. 1. There were in No. 5 a greater quantity of flinty particles, which would not pass the bolt. than in any of the other lots. The bran from No. 5 was also much thicker and heavier than that of No. 3.

Mr. HANNAM concludes, that in cutting wheat two weeks before it is fully ripe, there is a gain of fifteen per cent. of flour upon equal measures, a gain of 14 per cent in the weight of straw, and a gain of 7*s*. 6*d*. sterling in the value of every quarter (560 lbs.) of wheat.

Breeding Horses.

I have no desire for controversy, but there are a few points, involving important principles, in Mr. Burnet's second article on breeding horses, (current vol. *Cultivator*, p. 49,) which deserve notice.

Mr. Burnet remarks that "the most profitable horse to breed from is the one that offers the greatest certainty of producing a first-rate foal every year;" and it appears to be his opinion that such a horse can only be found among thorough-breds, for he says—"there really is but little certainty in breeding from any other than a thorough-bred stallion."

Thorough-bred, is a technical term applied exclusively to the race-horse, and presuming that Mr. Burnet uses the term in this sense, I confess myself at a loss to perceive the reasonableness of his assumption. Are blood-horses, as a breed, more uniform in their qualities and characteristics than all others? Compare them with the Norman, the Flanders, the English draught-horse, the Welsh, Scotch or Shetland ponies; Are "thorough-bred" horses more *alike* than these? And are the characteristics of "thorough-breds" more strikingly stamped on their progeny, by intermixture, than those of the breeds mentioned?

Is Mr. B.'s conclusion supported by authorities, or by observation, or even by his own reasoning? Mr. Burke, in his essay on the breeding and management of horses, published by the Royal Agricultural Society, (1845,) remarks, that those who have paid only a moderate share of attention to the subject of breeding, must be aware that there is perhaps no distinct breed of horses, "among which are to be found so many absolutely worthless animals, as among those that are thoroughbred."

But take the characteristic for which the thorough bred horse is most esteemed; that is, ability to run; and what is the "certainty" on this point? What proportion of thorough-breds are racers? Ask Mr. Botts of Virginia, or Col. Cost of New-York, or any other *experienced* breeder, and see what will be their testimony in regard to the "*certainty*" of breeding this description of horses.

Look at the great proportion of thorough-breds which become worthless from disease and from lameness, and which from various causes fail in training, and what are they? Read the remark of John Lawrence—"As to the refuse of our studs of race-horses, it consists usually of a parcel of half-gotten, delicate, weak, spider-legged creatures, which it is a misery to see applied to any labor whatever."*

But notwithstanding Mr. Burnet's position in regard to the "*certainty*" of breeding the right kind of stock from thorough-breds, he says—"it must be admitted that first-rate thorough-bred horses are so scarce in our country that it is difficult to procure their services." And further on we find the confession, that thorough-bred stallions in this country, have been "for the most part, little, gaunt, spindle-legged animals," which from various defects "have been sold for a song."

The English blood-horse has been in this country for many years, and in some sections, as parts of Virginia and Kentucky, he has, within the last fifty years, been bred in considerable numbers; while in some parts of New York, New Jersey and other states, he has been by no means rare. Why, then, with so much supposed "*certainty*" in breeding, are "*first-rate* thorough-bred horses" so "*scarce*," and poor ones so plenty that they can be bought for "a song?"

Mr. Burnet thinks that none but thorough-bred stallions should be used in breeding carriage-horses. It is unquestionably true that some thorough-bred horses, with the right kind of mares, have produced good carriage horses; but I presume no one will contend that any considerable number of the best of that class of horses in this country, have been thus bred; neither does it appear that this is the course pursued in breeding them in England. The Cleveland bays have there been much esteemed as carriage-horses, and we are informed by Youatt, that very celebrated carriage-horses, with "strength, activity and figure," have been bred by the Duke of Richmond "by crossing the Suffolk with one of his best hunters."

The saddle-horse, Mr. Burnet says, "should be at least three parts bred." Youatt admits the advantage of a *strain* of this blood for the saddle-horse and roadster; but at the same time adds, by way of caution, that—"when approaching to thorough-bred he will be scarcely fitted for duty. His legs will be too slender; his feet too small; his stride too long; *and he will scarcely be able to trot.*"

I will simply say in conclusion, that in my remarks about thorough-breds, I have had no reference to *individual* horses. Some of the stallions mentioned by Mr. Burnet I have not seen. I have seen Mr. Albott's *Consternation*, and think he is a good horse—better calculated to improve our stock for *useful* purposes than any blood-horse I have met with for a long time.—Equus.

Scotch & American Plows.

I am in hopes your correspondent W. may draw out some of your scientific men on the subject of the plow. How your northern plows do in the north *countries*, I do not know, but have no kind of doubt but they do well. In these parts they do not give entire satisfaction; the most of them "throw out," without any coulter; that is the beams are so low, that where there is litter or grass, the plow chokes, and is thrown out of the earth. I have some now, made by Ruggles, Nourse and Mason, that remedy this defect, they being some 13 to 14 inches high in the beam. I do not understand why our plows are made to turn so wide a furrow. I am fully aware that our planting community desire to do "a heap" of work with little labor.

Castings are not made heavy enough,—they may do for Yankee white folks, but as sure as "falling off a log," they will not do for southern "darkies."

To insure satisfaction in the use of the cast iron plow, I advise the castings to be made a little thicker, the points not quite so long or so wide, all cutting surfaces to be sharper than usual, and to be made as hard as a flint. There need not be much additional metal used, only to contract the width of furrow slice, say one-horse plow to 8 inches and a two-horse plow to 10. There are some soils where a one-horse plow will do at 9, but I would rather have 5 to 7½.

I have used cast Iron plows; that is, cast iron mould boards, points and shares, for several years. I am so well pleased with them that I shall continue.

My hands will break occasionally, but not compared to some of my friends, who declare they would not use the cast iron plow. I find, instead of paying 25 cts. to sharpen a share, and in two weeks more 25 cts. again and in two weeks more to pay $1.50 for laying, or probably not lay the first season, but to sharpen at least 3 or 4 times, costing 75 to 100 cts., that one or two points, worth 50 or 60 cts. will do equally well—and no lost time sending to shop. I have as many cast iron points and shares as I have wrought ones,—my cast iron has cost me say 50 cents each, with shares enough for 12 months more, whilst my wrought iron shares have cost me more than that in my own shop, only rating labor at 75 cts. per day.

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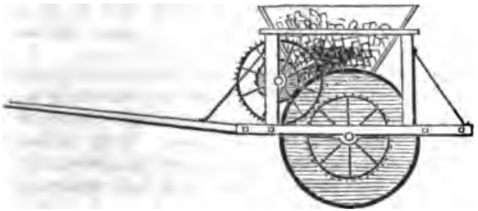
* Lawrence's Treatise on Horses, vol. 1, page 105.

If manufacturers wish to sell plows South, they must make their castings of the best iron; chill all wearing surfaces; make them higher in the beam, and plows to cost $5—this is price enough for a No. 1, one horse plow. Some hands want a mould board like the old Carey plow, standing up and bluff to their work, whilst others want only enough curve to let the earth fall over. M. W. PHILIPS. *Edwards, Miss, April* 23.

Coal Grinder and Soil Presser.

Charcoal would have been better known and more extensively used as a fertilizer, if the expense and inconvenience of its application had been less. It has been sufficiently tested, however, to establish the fact, that it is one of the most useful applications to the greatest variety of soils, that has ever been known; it only remains for us to get up some cheap and expeditious way of powdering and applying it; for which purpose the machine represented in the above cut is intended. It shows a side view of a common roller for pressing the soil, with the addition of a small grooved cylinder so geared with the roller by the cog wheels represented, as to cause the surface of the roller to move much faster than that of the cylinder, thereby adding to the crushing movement, that of grinding, which together, pulverize the coal and drop it in front of the roller. By this operation the roller is dusted and kept free from the adhesion of any earth, and the coal is evenly distributed and pressed into the soil, so that the wind will not blow all the best of it away. Those who believe in applying charcoal to the surface after sowing, will see the utility of this machine. DEAN. *Lyonsdale, N. Y., April* 22, 1848.



Value of Guano.

As a top dressing for grass, I have never yet found any thing superior to guano, especially directly after mowing or close pasturing. Spread broadcast from 250 to 500 lbs. per acre, according to the fertility of the soil; and if rain or heavy dew soon follows, the effect will be surprising. If the grass be cut or depastured early in the season, say by the last of June or fore part of July, I have repeatedly noticed that the guanoed patches produced as great a second growth as that of the first. This is a matter of no small consideration to those who have only a small quantity of land, and are desirous that it should yield the greatest possible product. Another consideration, guano gives the turf a greener and richer appearance than most kinds of manure; and will frequently bring in other highly nutritious grasses, which may not have made their appearance in the field for years before.

For Turneps, Guano is a very valuable manure, and has the merit of being extremely disagreeable to the fly. After the ground is prepared, spread the same quantity broadcast as upon grass, either before or after the turnep seed is sown, and then smooth over with a fine harrow, bush or roller, or with all three, as may be most convenient. Some prefer to apply only half the quantity of guano at the time of sowing the seed, and add the other half when the turnep plant is in its first leaf. They think this method a better guard against the fly, and that the guano proves equally beneficial.

For Corn.—At the last hoeing, apply a heaping table spoonful around each hill, about six inches from the stalks, and with the hoe mix it with the soil. It is very effectual in assisting the ears of corn to fill out well with grain; and it adds also somewhat to the growth and nutriment of the stalk.

For Wheat and Rye.—As a top dressing for these crops, at the time of or after sowing, guano has proved itself equal to the best of manures.

Strawberries and other fruits delight in guano. It increases the size of fruit of all kinds, and adds much to its delicacy and flavor.

For Various other Crops, Guano is highly recommended by our most experienced farmers and gardeners, when a large quick growth is desired.

It is upwards of twenty years since guano was first introduced into the United States, and for the past five years it has been very extensively used and highly approved of by the farmers and gardeners in the neighborhood of Boston, New-York, Philadelphia, Baltimore, Norfolk, Charleston and New-Orleans. A. B. ALLEN. *New-York, June* 13, 1848.

[For price of guano, which is quite low, see advertisement of A. B. ALLEN & Co., 189 & 191 Water St., New-York.]

Lightning Rods.

The electric fluid, whose passage through the air is commonly called a flash of lightning, has a stronger affinity for some substances than for others. This is easily shown with a common electrical machine; for having obtained a sufficient charge for our purpose, on presenting a rod of copper in one hand and a rod of glass in the other, at equal distances, the discharge will be found to take place on the copper and not on the glasss one—hence we have what are called *conductors* and *non-conductors*. Electricity passes with greater or less facility, according as the object with which it is brought in contact, possesses affinity for the fluid—or according to its conducting power. Hence those things which stand low in the scale, or non-conductors, afford an almost impassable barrier to electricity, and are commonly shattered to pieces in its passage.

To apply these facts to the subject of protecting buildings by lightning rods: suppose a discharge about to take place in close proximity to a house on which is affixed a lightning rod; by reason of the attraction of the rod, the fluid is turned out of its course to the building, (which is a non-conductor,) and passes down the metal into the ground—leaving behind none of those fearful appearances which would otherwise have marked its passage. Here, then, we see that the greater the difference between the conducting power of the building and the material of which the rod is composed, the greater will be the protection secured.

Iron and copper are the metals which are found to answer the purpose best; and although copper is the most powerful conductor, yet by reason of its high price, compared with iron, the latter is commonly used.

The next thing to be considered is the dimensions of the rod. And first, as to length or height; suppose a rod twenty feet high, to be placed exactly perpendicular to the ground; then with a radius of forty feet, describe a circle whose centre shall be the spot penetrated by the rod. The diameter of this circle will be eighty feet.

Now each and every object within this circle, which does not project out of an imaginary line drawn from the top of the rod to the circumference of the circle, will be found to be fully and amply protected. The law may be said to be, that a lightning rod will protect everything placed within the circumference of a circle describing it, with a radius twice the perpendicular height of the rod. Therefore, in putting up a lightning rod, the perpendicular height of the rod, from the point where it ascends from the ridge, must be 1-4th the length of the ridge, that is, if it ascends from the ridge at the centre between the two ends. If the rod ascends from one end of the ridge, its height must be one-half the length of the ridge—unless another rod is provided for the other end, in which case each must project one-fourth the length of the ridge. From this it will be seen that the great point in relation to the length of the rod, is not the absolute length from one end to the other, but only the length measured from the tip to where it leaves the ridge of the building. The height of the building makes no difference—the extreme horizontal length of the ridge only, being taken into account.

The diameter, or thickness of the rod should be—if iron, three-fourths of an inch thick—if copper, half an inch. The reason that rods of this thickness are required, is, that they may not be melted by the most powerful discharges that occur. The end of the rod that is to project above the building, generally terminates in a fork of three prongs. Of this there is no necessity if *one* is *well* made. The only reason for having three points is, if one gets rusty, there is still another remaining bright. Now if one is constructed so that it will not get rusty, it is all that is required. The rod should be brought to a point, and perfectly capped with some metal not liable to oxydation. Platina, gold, and silver, are used—the two first are preferable to the last. The cap should be from an inch and a half to two inches in length and of the thickness of a sixpence.

The means of attaching the rod to the building, are various. The most effective and at the same time the most simple is glass. The object is to permanently attach the rod to the building with a non-conducting material. The mode of attachment is as follows: In all cities you may find what are called *glass spools;* Through the hole in the centre the rod passes. On the groove, on the outside, (where in a spool the cotton is wound,) is to be fitted a bolt, which may be readily driven into the building.

The different lengths of the rod should be rivetted together—being first fitted by shoulders. The bottom of the rod should terminate in two or three branches going off in a direction from the building, four or five feet under ground. The depth may vary, according to the nature of the soil—wet soils requiring less and dry ones a greater depth. JOHN J. HIGGINS.

Stones for Draining.

I have seen an article written by Prof. J. P. NORTON, on the subject of draining (Vol. v. No. 1, page 16,) where he remarks that stones may be used as a substitute for tiles or pipes; but quotes from Mr. SMITH of Deanston, that no stones should be used much larger than a hen's egg. Also, same vol. No. 5, p. 137, we have an account of Mr. PHINNEY's mode of draining in which he applied stones, the size or weight of which is not mentioned. Now what I wish to ascertain of Mr. P. is, what sized stones he applied. The size of stones is a matter of much importance with me, for the following reason. On my farm of 60 acres, I presume there are not stones enough of the weight of one pound and less, to apply in draining one acre, and to pick them up one at a time, or to break larger ones, I think would be more expensive than pipes, even at eight cents a rod. Besides, stones of those weights are very little obstruction, as they may be easily crushed into the ground by passing the roller over them.

But stones from the weight of one pound to five or six pounds, are very plentiful—a great nuisance, and wall-layers say they are not fit to put into a wall. If, therefore, they will answer in draining, then the farmers of New-England may assume a two-fold advantage; first, of clearing the land of otherwise useless stones, and again have means within themselves whereby to drain their land—and advantages I think are an object worthy to be secured by all cultivators of New-England's sterile lands. A. W. DAY. *Colchester, Ct. May* 25.

To Farmers.—No. II.

The education of agriculturists is a subject much discussed in our own and other countries at the present day; and the question of establishing schools, particularly for this purpose, in connexion with which, it is proposed to have pattern farms, where young men may resort to learn the science of agriculture, is a subject often agitated, and much is said, and perhaps justly, in favor of such project. There are also professorships established in several of our older colleges for the like purposes, all of which efforts show that the public mind is becoming awakened to the subject of agricultural education. Yet we apprehend that these measure alone are not fully calculated to meet the entire wants of the mass of our farming population. A few of our more wealthy farmers may be able to spare the services of their sons at a proper age for them to attend, and have the ability to pay the expense attending the instruction in such institutions. Still, comparatively few could be expected to avail themselves of opportunities like these. Even if it was designed to support these schools at the expense of the State it would avail but little to the less wealthy and larger portion of our farmer's sons, for in most, if not all, of our public institutions, in addition to other difficulties, it requires some special influence to gain admittance to them. We would by no means object to the establishment of such schools, and while we most heartily hail the appointment of agricultural professors in our colleges, as a token of good to the farmer, we cannot believe these means of education will wholly accomplish the end designed, or that they are entirely adapted to confer the "greatest good to the greatest number." It appears to us, that in order to benefit the farming community, as such, the foundation must be laid in common schools. We cheerfully admit the value of what is now learned in these schools in other branches of knowledge to the farmer's child, as well as to the children of other portions of society; but we would not have his education stop here; we would have something particularly adapted to his wants. Let the first principles of agriculture there be taught, the advantage of mixing soils, the benefit of deep tillage of the land, of draining, the proper means of saving and applying manures, the analysis of soils, of grass, grains, roots, and other crops, together with the necessary cultivation to produce good crops. And he would better understand the means necessary to accomplish the end for which he labors. He would also be prepared to be benefitted by the reading of agricultural publications, and to profit by his own after experience, and any new discoveries in science, applicable to his calling. Much of value is now published in our agricultural papers, which but few of our farmers are prepared by their education to appreciate.

A short time since, on inquiring of one of our neighbors, a respectable farmer who has several sons, whether he took an agricultural paper, he replied, that he did not; and the reasons he gave for not doing so were, "that there were many things published in them that he thought was not correct, and much that he did not understand. and besides, (the old story,) he did not believe in book farming." It is probable, had he better understood their value, his opinion would have been somewhat changed, and his sons now growing up to manhood, might have had occasion to thank him for the perusal of an agricultural paper. Although the feeling manifested by our neighbor is in a measure done away, it still exists; and these publications do not yet find access to but a small proportion of the agricultural population of our country. If any person wishes evidence of this, let him attempt to obtain subscribers to even the best of these papers, and he will soon be convinced of the fact, that the circulation of these papers is quite limited in the most favored portions of our country. If the subject of agriculture was properly introduced and taught in our common schools, we should soon see an universal improvement in the agriculture of our country, and a great and increased demand for all those publications relating to it. Agricultural pursuits embrace a large part of our whole population; and our prospect as a nation, in a great degree, depends upon the intelligence and success of those engaged in these employments; and it is of vital interest to our country that the study of agriculture as a science, having so great a bearing on the welfare of this portion of our community, should no longer be neglected. Oneida.

Improvement of Stock.

This subject is growing in interest and importance from year to year, especially in those sections of our country better adapted to rearing cattle than raising grain. Much has been done already by our agricultural societies and individuals to improve our stock, and much remains yet to be done. It is the duty, as well as the interest, of every friend of agriculture, to do all he can to elevate the standard of this important branch of farming. I cheerfully grant that the efforts of the past have to some extent been crowned with success. But have not those improvements been too much confined to a certain class of our scientific farmers, whose rank and pecuniary circumstances will consistently admit of a large expenditure for such improvements. This appears from the fact, that the greater amount of premiums on stock awarded by agricultural societies, are to a Colonel A., Major B., the Hon. C., Esq., or Judge D., or some other personage of high rank and affluent circumstances; while the great mass of farmers are living on from year to year with but little or no improvement of their stock. Truly, such things ought not so to be. This is confining the benefits of such improvements within too narrow limits. Something more should be done to awaken the interest and attention of the agricultural community to this important subject, that *all* may in a few years have the privilege and satisfaction of looking around on their choicest specimens of improved stock.

One cause of this evil *may* be, that there is a want of interest among many in this particular. This may be remedied by a wider circulation of such valuable agricultural publications as the Cultivator, which cannot fail to create a laudable ambition, and to stimulate to activity every farmer who reads them. But the most prominent cause is, that many of our farmers, who may be more or less in debt for their farms, think they cannot afford to make such investments as are necessary to purchase those improved breeds of cattle so highly and justly recommended.

But how shall *this* be remedied? is a question more easily asked than answered. In looking over the May No. of the Cultivator, I noticed, in the communication of F. Holbrook, that the "Massachusetts Society for promoting agriculture," has hit upon a plan which I think would in a great measure remove this cause.

Of a truth this "Society has set us an example worthy of all imitation." If the agricultural society of this state, as well as the several county societies, would expend a portion of their funds in purchasing the best breeds, to be distributed for the improvement of stock, subject to such regulations as would benefit our farmers *generally*, we should see that a new impulse would be given to the agricultural interests of this State.

I am aware that this subject is an important one, and having with much diffidence submitted the above remarks for the consideration of the numerous readers of the Cultivator, I leave it, hoping to see it enlarged upon by those better qualified to do it justice. C. V. H. *Exeter, Otsego, May* 28, 1848.

Raising Wheat.

I do not propose to relate any account of raising *big* crops, which are few and far between in this section. Such are sometimes made the text for a communication from your correspondents, when the common method of farming is left out of sight. I take for my text, twenty bushels of wheat to the acre, which I think can be raised under ordinary circumstances, where wheat growing is an important branch of farming. There are here two dangers to contend with—the fly and rust. My crop, for the last year, consisted of 100 acres, which averaged as above stated, grown on land that had been seeded to timothy and clover two and three years. It was summer fallowed in May and June, plowed deep, sheep kept on through the summer. The first of August commenced harrowing the fallows across the furrows, and did it *thoroughly*. By the middle of August commenced cross-plowing in lands from six to eight paces wide, marked out straight and true; the centres of the lands form ditches to carry off the surplus water, and also serve as guides in sowing. The land remained from two to four weeks after plowing, before sowing, which I am sensible was a benefit to the crop. The seed was sowed on the furrows, so as to fall in drills; two bushels of seed per acre, and harrowed lengthwise of the furrows, which preserves the ditches and drills. The ditches were cleared out by running the plow through them; and cross ditches were made where the water would settle, so as to carry it off, and leave the ground free from it. Wheat will not grow where it is immersed in water.

My method of manuring, is to sow four to six quarts of clover and timothy seed per acre, immediately after harrowing in the wheat. Should the land be of a clayey nature, the seed should not be sown until the next spring. This is the cheapest manuring I have found, and it answers every purpose for raising wheat. On the sandy soil, I sow ¾ of a bushel of plaster per acre, in the month of May.

I commenced cutting wheat ten days before my neighbors, and as many days before it was fully ripe, which satisfied me that wheat is not generally cut in season.

But allow me to indulge my *organ* of prophecy: It is, that our wheat crop is gradually failing—falling before its natural enemies—the enemies that Nature produces, and which are growing in their strength, and the species greatly multiplying. The staff of life must come from some other production of Nature, for it is my prophecy that Omnipotence has decreed that these things will be so.

> "There is a divinity that shapes our ends,
> Rough-hew them as we will."

James Otis: *Berlin, Erie County, Ohio, February* 20, 1848.

[We are unable to discover any rational grounds for Mr. Otis' "prophecy." The increase of the "natural enemies" of the wheat crop, we do not regard as cause for great alarm. We must study the habits of those enemies, and be able to repulse, if not exterminate them. As good crops, (and even *better* ones,) are now produced on the Old Continent, by an improved system of husbandry, as were grown on the same lands a thousand years ago, notwithstanding the prevalence of insects, &c. Eds.]

The Estates of Gen. Washington.

As the subject of the purchase of Mount Vernon by the general Government is attracting attention, it may interest some of our readers to read a brief description of the estates of Gen. WASHINGTON, written by his own hand. These estates comprised over eight thousand acres of land, lying in the state of Virginia; of which the Mount Vernon premises constituted more than one-half. The remainder was divided into four farms, of from six hundred and fifty to twelve hundred acres each. In the year 1793, Gen. W., in a letter to ARTHUR YOUNG, proposed to lease the last mentioned farms to English or Scotch farmers, who might be disposed to emigrate to this country; the leases to run from seven to ten years, and the rent to be, (in the language of the proposition,) "*a Spanish milled dollar*, or other money current at the time, in this country, equivalent thereto, *for every acre of plowable or mowable ground*, within the enclosures of the respective farms."

The first part of the description, it will be seen, relates to the whole tract owned by Gen. W., including Mount Vernon, where he resided. The letter, from which we make the following extracts, is printed in the volume of "*Washington's Agricultural Correspondence*," published by FRANKLIN KNIGHT.

"No estate in United America," (writes Gen. W.,) "is more pleasantly situated than this. It lies in a high, dry and healthy country, three hundred miles by water from the sea, and on one of the finest rivers [the Potomac] in the world. Its margin is washed by more than ten miles of tide water; from the bed of which, and the innumerable coves, inlets, and small marshes, with which it abounds, an inexhaustible fund of rich mud may be drawn, as a manure, either to be used separately, or in a compost, according to the judgment of the farmer. It is situated in a latitude between the extremes of heat and cold, and is the same distance by land and water, with good roads and the best navigation (to and) from the Federal City, Alexandria and Georgetown; distant from the first, fifteen, from the second, nine, and from the last sixteen miles. The Federal City, in the year 1800, will become the seat of the General Government of the United States. It is increasing fast in buildings and consequence, and will, I have no doubt, from the advantages given to it by nature, and its proximity to a rich interior country, and the western territory, become the emporium of the United States.

"The soil of the tract of which I am speaking, is a good loam, more inclined, however, to clay than sand. From use, and I might add abuse, it is become more and more consolidated, and of course heavier to work. The greater part is a greyish clay; some part is a dark mould; a very little is inclined to sand, and scarcely any to stone. A husbandman would not wish to lay the farms more level than they are, and yet some of the fields, (but in no great degree,) are washed into gullies, from which all of them have not as yet been recovered.

"This river, which encompasses the land the distance above mentioned, is well supplied with various kinds of fish, at all seasons of the year; and in the spring with the greatest profusion of shad, herrings, bass, carp, perch, sturgeon, &c.; several valuable fisheries appertain to the estate; the whole shore, in short, is one entire fishery.

"There are, as you will see by the plan accompanying, four farms besides that at the mansion house. These four contain three thousand two hundred and sixty acres of cultivable land, to which some hundreds more adjoining, as may be seen, might be added, if a greater number should be required; but as they were never designed for, so neither can it be said they are caculated to suit, tenants of either the first or of the lower class, because those who have the strength and resources proportioned to farms of from five hundred to twelve hundred acres, (which these contain,) would hardly be contented to live in such houses as are thereon. * * * *

"I would let these four farms to four substantial farmers, of wealth and strength sufficient to cultivate them, and who would ensure to me the regular payments of the rents; and I would give them leases for seven or ten years, at the rate of a Spanish milled dollar, or other money current at the time in this country, equivalent thereto, for every acre of plowable or mowable ground, within the enclosures of the respective farms; and would allow the tenants, during that period, to take fuel and use timber from the woodland, to repair buildings, and to keep the fences in order until live fences could be substituted in place of dead ones; but in this case no sub-tenants would be allowed. * *

"Having said thus much, I am disposed to add further, that it would be in my power, and certainly it would be my inclination, (upon the principle above,) to accommodate the wealthy or the weak-handed farmer, (and upon reasonable terms,) with draught horses, and working mules and oxen; with cattle, sheep and hogs; and with such implements of husbandry, if they should not incline to bring them themselves, as are in use on the farms. On the four farms there are fifty-four draught-horses, twelve working mules, and a sufficiency of oxen broke to the yoke; the precise number I am unable this moment to ascertain, as they are comprehended in the aggregate of the neat cattle; of the latter, there are three hundred and seventeen; of sheep, six hundred and thirty-four; of hogs, many; but as these run pretty much at large in the woodland, (which is all under fence,) the number is uncertain. Many of the negroes, male and female, might be hired by the year as laborers, if this should be preferred to the importation of that class of people, but it deserves consideration—how far the mixing of whites and blacks together is advisable; especially where the former are entirely unacquainted with the latter."

Effects of Special Manures.

At a late meeting of the Council of the Royal Agricultural Society, Mr. LAWES made some interesting remarks in regard to effects of various manures on grain crops. He cited the results of many experiments which he had made on this subject. The chief effect of manure of any kind, he concludes, is to increase the quantity of grain and straw—the *quality* of the grain, or its weight per bushel, and the proportion of grain to straw having been about the same on the lots where manurer were used, and on those which had none. Great differences in the quality of the grain, and in the proportion of straw were, however, to be found in the produce of various years, and it was concluded that the effect of manure upon the quality of grain, and the proportion of grain to straw, was very small when compared to the effect of temperature and climate.

Mr. L. referred to the opinion generally held by chemists, that the nitrogen or nutritive elements of grain could be increased by supplying the soil with substances rich in nitrogen. He exhibited samples of grain, some of which were grown by means of mineral manures, and some by minerals with large quantities of ammoniacal salts. A sample, grown by superphosphate of lime, gave upon analysis 3.03 per cent of nitrogen; when ammonia was added, the per centage of nitrogen was only 2.65. Leibig's wheat manure, composed of mineral matter, gave 1.81 per cent of nitrogen, when ammoniacal salts were added, only 1.69 per cent. A sample of wheat grown in Australia, of remarkable fine quality, gave 1.94 per cent of nitrogen. Another, of indifferent wheat, grown on the borders of the Black Sea, and employed in making the finest description of maccaroni, gave 2.71 per cent of nitrogen. He remarked in conclusion, that while the *produce* is greatly increased by the employment of ammonia, it appears that the per centage of nitrogen in the grain is rather diminished. That under a proper temperature, starch is accumulated by the influence of ammonia, and that in general, those wheats which bear the highest price, are comparatively poor in nitrogenous compounds. This latter conclusion agrees with analyses made long ago. Davy showed that spring wheat and red wheats generally gave a larger per centage of nitrogen than the highest priced white wheats.

Sir JOHN JOHNSTONE stated before the Council, the results of some experiments he had made on a soil naturally good for wheat, which came into his hands in a foul and exhausted state. In reference to the value of Liebig's patent mineral manure, he had found it to produce the smallest results in comparison with the other artificial manures he had used along with it.

Professor WAY alluded in a highly complimentary manner to the valuable experiments conducted by Mr. LAWES, and the excellent papers he had written, which had been published in Journal of the Society. If he did not entirely agree with the views of Mr. L., he "felt convinced that he was pursuing a system of inquiry that must ultimately elicit the true principles of agricultural science." He thought the facts brought forward by Mr. L. were calculated to "encourage the agriculturist in all reasonable hopes of improvement, but at the same time to dissipate the illusory notion that he could at any time become independent of season and climate." In regard to the experiments with mineral manures, Professor W. thought they proved the impossibility of obtaining valuable agricultural results by the use of mineral substances alone, unless there were an abundance of matter in the soil capable of yielding the ammonia and carbonic acid necessary for vegetable growth. In regard to the failure of Liebig's manure, Professor W. considered that in "seeking to render the alkaline salts more permanently available to vegetation, the mark had been overshot, and that the manure was not sufficiently soluble for the wants of the crop to which it was applied; at least he judged so from a sample he had himself analyzed."

Animal Physiology.

An English periodical, in noticing Richardson's work on swine, lately published, gives a quotation in reference to the "points of a good pig," in which it is stated that the breast should be broad, as denoting "good room for the play of the lungs, and a consequent free and healthy circulation, essential to the thriving or fattening of any animal."

This, though a point upon which practical men are generally agreed, is contrary to the theory of some physiologists, viz: that animals, to fatten readily, should have *small lungs*. Prof. PLAYFAIR assumed, that if two pigs were taken, one of which had lungs of twice the size of the other, the one with the smallest lungs would make twice as much fat for the food consumed, as the one with the largest lungs.

So far as the observations of the writer have extended, this theory does not appear to be supported by facts. To obtain *positive* results, however, it is obvious that a series of close and thorough examinations and trials with various animals would be necessary. At the same time, it may be useful to give such facts as come within our reach.

In our April number, we noticed some fat animals which had been lately slaughtered in this city. We saw most of these animals before they were killed, and particularly noticed their forms and outward points generally. We also saw several of them dressed, and had the opportunity of examining their internal organs. Of the cattle, the most remarkable were the heifer, fattened by Mr. MCKOWN, the twin oxen from Mr. BASSETT, and the calf from Mr. WOOLFORD. These were of extraordinary fatness, and it may be remarked that when an animal is fattened to so great a degree, the lungs become compressed by the accumulation of internal fat, and are, therefore, of less bulk than when the beast was in a more natural condition.

We took particular notes in regard to the appearances of those animals, but not having room at present for the details we will simply state, that in every case the heart and lungs corresponded to the external dimensions of the chest; and that the qualities of early maturity and fatness, were in proportion to the size of these organs; in other words, the fattest animals were those which had naturally the largest chests and largest heart and lungs.

Sheep in South Carolina.

Mr. B. F. STANLEY, who dates at Pliny P. O., S. C., wishes to obtain a Scotchman, who has been accustomed to the management of sheep, with the assistance of dogs. He says—"I have abundant opportunity for wintering 400 or 500 sheep, and ample range during the summer months; but the difficulty is their rambling off and being killed by dogs. I have seen sheep pass the whole winter here without being fed or receiving any attention whatever; they looked well in the spring. It is seldom we get up in the fall, more than half the number we turn out in the spring—at least so it is with me.

"I should like to employ a man, and give him a share in the profits of the sheep. I would prefer a single man, though one with a small family would not be objectionable. My place is not twenty-five miles from that portion of the Alleganies called the Blue Ridge. I can vouch for its exemption from the fevers of the cotton region."

Norman Horses.

MESSRS. EDITORS:—Allow me to confirm, from personal observation, the statements in the last Cultivator, of your correspondent "J. B. B." in regard to the merits of the Norman horse. I think, however, that they will average a larger size than that stated in the article alluded to. The following is an extract from notes made, when travelling in France, in 1845:

"From what I have seen of the horses in the northern and central departments of France—such as are used in the diligences—I consider them a superior breed of animals, and most of them are well made and handsome, with remarkably fine shoulders and quarters. One-fourth, perhaps, were inferior and wanted size; but take them as a whole, and the general average is better than the public coach horses of England. Englishmen themselves, will tell you this. The Norman horse is strong, surefooted, very true, with good wind and great power of endurance. They are also very docile and free from vice, as frequently five, seven or nine *stallions* are attached to one diligence, and they are so easily driven that a boy of twelve years of age might safely take the place of the coachman. The most common colors are roans and greys.

"The largest and heaviest of these animals are capital for slow draught, and also would make fine coach stock for the city; while the lighter weighted are well calculated for pleasure carriages and quick work. They possess many qualities in common with the Morgan, though of a larger size. They are the best horses I have seen in Europe for hard and fast work, as I have frequently known from five to seven, make nine miles per hour with the ponderous diligence filled with 20 passengers, and their luggage, besides a large quantity of merchandize, the whole said to weigh 10 or 11,000 pounds. In the Malle-poste they are frequently driven ten and eleven miles per hour."

I have often wondered that there were not more of this valuable breed of horses introduced into the United States. They would unquestionably improve our breeds, and as the horse for all-work, are better than the English blood stock. The few that have been introduced into this country have proved to be fine animals, for instance, the importation by Mr. Harris of N. Jersey, and the sire of the Morse Grey.

They could be purchased convenient for shipment, at Havre, and the best of them might be had for $200 or $250. A Maryland Subscriber. *Baltimore, June 5*, 1848.

Advantages of Water in Barn Yards.

By reading the able communications that have from time to time appeared in the Cultivator, I had formed a favorable opinion of the advantage of having running water in my cattle and sheep yards. Although I had a supply of water within ten or fifteen rods of my barn, I determined to fetch a spring that was situated nearly half a mile off; and I will now say, that after a trial of several months, it has more than realised my highest expectations. I am satisfied that I shall save at least one cart load of manure from every ox or cow that I feed in my yard, more than I did when they had to go to the river to drink. Then they would seldom go but once in a day, and in stormy or bad weather, not so often; consequently, when they did go, they would drink so much as to render them uncomfortable for several hours.

Now they will drink on an average about five times a day. I am satisfied that they will keep in better condition on less feed than formerly. I think that in the item of manure, it will pay the expense, to say nothing of the comfort of not being obliged to go ten or fifteen rods in cold and stormy weather to water horses; and it is often difficult when the ground is slippery, to get cattle to go a few rods to get their water. There are very many situations, where, with a trifling expense, persons could have water in their yards at all times; and I am satisfied, that if they once knew the advantages of this, and of having running water at their dwelling houses also, they would not do without it again for twice the cost. A small stream of good soft water will answer for a large family, and will save many a step and many a hard pull to draw it from a well.

Inquiry.—I think of paving my cattle stables with stone; also to form drains to convey the urine to a cistern, with the intention of using it to saturate the manure after it is thrown from the horse and cattle stables. What kind of cement would stand the water, the frost and the tread of the cattle? how made, and how used, and what would be the cost? A Subscriber. *Westchester County, March*, 1848.

Old Fashioned Theology.—The following remonstrance against mechanical improvement exhibits the light in which the first introduction of the fanning mill was viewed by some persons, at the time when sifting it in a current of wind was the only known way of expurgating the chaff:—

"Your Ladyship and the steward has been pleased to propose that my son Cuddie should work in the barn wi' a new fangled machine for dighting the corn from the chaff, thus impiously thwarting the will of Divine Providence, by raising wind for your ladyship's own particular use, by human art."

Notices of New Publications.

Chemical Technology; or Chemistry applied to the Arts and to Manufactures. By Dr. F. Knapp, Professor at the University of Giessen, translated and edited, with numerous notes and additions: By Dr. Edmund Ronalds, Lecturer on Chemistry at the Middlesex Hospital, and Dr. Thomas Richardson, of Newcastle-on-Tyne. First American edition, with notes and additions, by Professor Walter R. Johnson, of Philadelphia.

This is one of the most valuable books that has lately been issued—valuable on account of the vast amount of information it contains relating to the useful arts. It consists of two general divisions, the first of which describes those branches of manufacture depending on the process of combustion, and the second the processes concerned in the production and application of the alkalies and earths. In the first chapter, the value and uses of different kinds of fuel in the production of heat, are considered at length, together with the various modes of heating and lighting buildings; modes of making illuminating gas; different kinds of lamps; making charcoal and coke, the production of tar, &c. Other portions of the work describe the processes of obtaining potashes, soda; the manufacture of soap in all its details; of various acids used in the arts; of gunpowder, gun cotton, salt petre or nitre, salt, &c. &c. The work contains 500 pages, octavo; is very handsomely printed, and contains upwards two hundred well executed engravings and illustrations. We shall have occasion to draw on the contents hereafter. Published by Lea & Blanchard, Philadelphia.

New System of Vegetable Physiology.—We have received a pamphlet with this title, written by Daniel Vaughan, Cincinnati. The chief design appears to be to show that the ascent and elaboration of sap, the conversion of humus into woody fibre, and the production of vegetable compounds generally, is affected by currents of electricity, aided by the agents light and heat. Some of the author's reasoning is certainly very plausible, though we have not sufficiently considered the subject to pronounce, positively, in regard to the theory advanced.

Self-Education: or, the Philosophy of Mental Improvement. By William Hosmer. Published by Wm. H. Ongley, Havana, N. Y.

The above is a duodecimo volume of 262 pages. It is a work well calculated to aid the mind in the acquirement of knowledge. The author appears to be familiar with the subject he has undertaken to illustrate, and has given many valuable ideas in a clear and perspicuous style. He considers education the acquirement of knowledge, which is valuable just in proportion to the importance of the things learned. We think the work will prove useful to a large portion of the youth of our country, whether they enjoy the benefit of schools and instructors, or are obliged to pursue unaided, the toilsome journey up the "hill of science."

Report of the Commissioner of Patents for 1847.—The report of Mr. Burke, Commissioner of Patents, for the last year, is a document which reflects credit on that officer, and the individuals from whom the valuable materials of which it is composed, were obtained. It forms a volume of 661 pages, comprising a greater amount of useful information than any previous report from this department. In addition to much statistical intelligence of a general nature, in regard to the products and trade of the country, there are several original papers on various subjects, drawn up with care and labor. Of this class we may mention the elaborate and valuable article on wool-growing and the management of sheep in Germany, by Mr.

Fleischmann; the culture of the grape, and the manufacture of wine in the United States, by Mr. Longworth; the hog crop of the United States, by Mr. Cist; and experiments in feeding hogs, by Mr. Ellsworth, (formerly Commissioner of Patents.) There is also much valuable matter relating to other subjects, which we cannot now particularly notice, but shall have occasion to refer to them in future.

Mr. Burke gives the following in regard to the amount of the different kinds of grain produced in the United States in 1847:

Breadstuffs.	Bushels.	Total bushels.
Indian corn, or maize,	539,350,000	
Wheat,	114,245,500	
Rye,	29,222,700	
Buckwheat,	11,673,500	
		694,491,700
Grain not used for breadstuffs.		
Oats,	167,867,000	
Barley,	5,649,950	
		173,516,950
		868,008,650
Other articles of food.		
Potatoes,	100,950,000 bushels.	
Beans and peas,	50,000,000 do	
Rice,	103,640,590 pounds.	

Estimated population, 20,746,400.

Domestic Economy, Recipes, &c.

The Dandelion.

Dr. Holmes, of the *Maine Farmer*, says: The dandelion is valuable, both as an article of diet and as a medicine. "It is eagerly sought for by many as a very excellent plant for greens. A very wholesome and pleasant beer is made by substituting it (roots and all) for spruce. In medicine, it is considered an excellent tonic and corrector of any derangements of the functions of the liver, dyspepsia and chronic diseases of the digestive organs. It may be used for these purposes in two ways, viz: in decoction and in the form of an extract. For decoction, take, say root and herb, washed clean, half a pound; water, half a gallon; boil down to a pint. The dose from one to two wine glasses full once or twice per day. To make the extract, take fresh roots, bruise them, say a pound and a half; pure, soft, boiling water, two gallons; let it stand twenty-four hours; then boil down to a gallon, strain it while hot, and simmer it away gently to a thick waxy substance. Be careful not to burn it in the latter stage of the process. It should be a brown, bitter, aromatic substance, and easily dissolved in water. The dose of this is from ten grains to thirty grains."

Salting and Smoking Hams or Beef.—The peculiar flavor of the celebrated Westphalia hams is partly attributable to juniper berries having been put in the brine. Portugal hams and sausages are held in high estimation. "D. S. E.," in the *Agricultural Gazette*, states that the most simple method of preparing these hams, is to rub them daily with a proportion of bay and common salt. At the end of this time, with a brush, smear all over once or twice a small portion of pyroligneous acid, according to flavor, diluted with brine. In three or four days, hang it up to dry, or beef may be left in pickle. A small quantity of garlic is sometimes put in the pickle to give the flavor to such as like it. The same writer states that the far-famed Portugal sausages, called "lombo de porco," (loin of pork,) are made of the entire loins cut from the bones and rolled together, before being put into the skins; they are well soaked in a port wine brine. "The equally famous Samego hams, so called, though made all over the northern provinces of Portugal, are cured with sugar, which gives them that peculiar tenderness and delicacy, and the brine, (made of Port wine, sugar, salt, garlic and sweet herbs,) that peculiar flavor for which they are so renowned. Birch wood, myrtle, cistus, and other aromatic herbs, which abound all over the country, are used for smoking them."

Corn Meal Pudding.

Our correspondent Jethro, of Reclusa, Georgia, sends us the following receipt: "Seven spoonfuls of sugar, yolks of six eggs, beaten very light, with the addition of the whites, and cut it with a knife to a stiff froth; five spoonfuls of coarse meal stirred in lightly; to be baked brown and served with wine sauce."

Catching and Destroying Rats.—We have on a previous occasion mentioned that the oil of rhodium and oil of anise, were sometimes used to attract rats. Professional rat catchers in England employ these substances in enticing rats to their traps. Dr. J. V. C. Smith, of Boston, lately stated at one of the agricultural meetings, that he had tried anise alone, and the rats came forward immediately while he was present. He stated also that ground plaster or gypsum, mixed with dry meal, will be eaten by rats, and that it will *set* in the stomach and kill them.

Peach leaves, and sometimes the kernels of peach stones, are used to flavor cakes and pies. They contain small quantities of prussic acid, and are often deleterious. A whole family were poisoned in Mississippi, one of whom died, by eating pies flavored with peach leaves.

Greasing Carriage Wheels.—The best composition that can be prepared to relieve carriage wheels and machinery from friction, is composed of hog's lard, wheat flour, and black lead (plumbago.) The lard is to be melted over a gentle fire, and the other ingredients—equal in weight—may be added, till the composition is brought to a consistence of common paste, without raising the heat near boiling point. One trial of the paste will satisfy any one of its superior quality. *Ex. paper.*

HONOR TO THE TOILING HAND.

All honour to the toiling hand,
  Or in the field or mine;
Or by the hissing steam machine,
  Or on the heaving brine.
Whatever loom or barque, or plow,
  Hath wrought to bless our land;
Or wrought around, above, below,
  We owe the toiling hand.
    Then honour—honour to the toiling hand.

In battles with the elements,
  It breaks the stubborn sward;
It rings the forge,—the shuttle throws,—
  And shapes the social board.
It conquers clime,—it stems the wave,—
  And bears from every strand
The sweetest, best of all we have,
  Gifts of the toiling hand.
    Then honour—honour to the toiling hand.

Productive Apple Tree.—Samuel C. Corwin, of Phelps, Ontario county, N. Y., has a tree of the Rhode Island Greening, which yielded 70 bushels in 1847, 65 of which were good and fit for market.

Irrigation in Mexico.—According to Humboldt, irrigated soils in Mexico often yield from 40 to 60 times the seed; 16 for 1 is reckoned a middling crop; and, taking the whole of Mexico, the mean produce may be estimated at from 22 to 25 for 1.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received, since our last, from Wm. R. Prince, Deane, J. T. Plummer, Charles Colby, A. W. Day, J. B. T., Hampden, Subscriber, Isaac Hildreth, C. V. H., A Maryland Subscriber, F. Emslee, One of your Subscribers, J. C. H., A. B. Allen.

Books, Pamphlets, &c., have been received, during the past month, as follows: "Knapp's Chemical Technology," vol I; from the Publishers, Lea & Blanchard, Philadelphia.——"Ewbank's Hydraulics and Mechanics," part VIII., from the Publishers, Greeley & McElrath, New-York.——Report of the Commissioner of the Patent Office, from the Commissioner, Hon. Edmund Burke, and D. Gold, Esq.——Seeds of a species of Clover, growing in the vicinity of the city of Mexico, from A. Phelps, Esq., New-Orleans. ——Self-Education, or the Philosophy of Mental Improvement, by Wm. Hosmer. From W. H. Ongley, publishers, Havana, N. Y.

Hemlock Hedge or Screen.—In the garden of J. W. Wheeler, Esq., of Hyde Park, we lately saw a beautiful hedge, or screen, of hemlock, (*Abies canadensis.*) . We had not previously seen this material used for such a purpose, but in this instance it has answered admirably. Mr. W. informed us that it had received no particular pains in its management. The young trees were taken from the woods when from 6 to 8 inches high, and set where they now stand; since which no attention, has been given except to keep, them sheared in the proper form It is five years since the screen was planted, and it is about three and a half feet high, perfectly even, and so dense as to be wholly impenetrable to sight from the ground to the top. We would not be understood to recommend hemlock as a live fence against cattle, and we are not certain that it would answer against sheep, as they might check its growth by browsing, especially in the winter or early in the spring, when, in consequence of the scarcity of green forage, they will eat hemlock freely. But for a screen, in pleasure grounds or gardens, we have seen nothing which surpassed the one alluded to.

Sale of Short-Horned Cattle.—Mr. Prentice, of Mount Hope, has disposed of all his short-horned cattle to George Vail, Esq., of Troy. The lot consisted of twelve head, four of which were cows that Mr. P. reserved at his sale in 1845, and the others were young animals bred from them since that time. As the cows mentioned were those which Mr. P. selected especially for himself, from his former herd of about sixty head, it may well be supposed that they are of high value, and we may add that their offspring bid fair to equal them in the points and qualities which constitute first-rate short horns.

The circumstances which have induced Mr. Prentice to part with this stock are, briefly, the appropriation of his farm to purposes which render it impracticable to keep a breeding herd. The addition of these animals to Mr. Vail's former stock, puts him in possession of the largest and most distinguished herd of short horns in this section of the country; and as it is his intention to continue the breeding of them, persons seeking for choice animals of this highly esteemed breed, will here have the advantage of a wide range for selection.

We trust that Mr. Vail's success as a breeder will be proportionate to his enterprise, and indeed we believe that good animals of this breed will continue to command remunerative prices. At some of the late sales in England, quite as large sums have been obtained as this description of stock has generally brought in times past. We notice, for instance, that the remainder of the herd of short horns belonging to the estate of the late Earl Spencer, has just been disposed of at public sale. Eighty-eight animals were sold, and brought the enormous sum of £5,743.10*s.*, about $28,717. Sixteen bulls produced an average of £90, ($450,) each. One, "*Upstart*," sold for £210, ($1,050,) and another, "*Usurer*," for £420, ($2,100.)

Natural History.—We are indebted to Mr. Henry Jordan, for a copy of the doings of the "Natural History Department of the Brooklyn Institute," of the meeting held on the 18th of May. Interesting observations were made by several gentlemen, especially in reference to some department of entomology. Mr. Hooper observed, that lepidoptenous insects were separated into three grand divisions: "The butterfly, the moth, and the sphinx, and these three are again divided into various families and generations, and then into species. The greatest distinction between the moth and sphinx besides form, flight and food, consist in the form the larvæ of all the sphingii assumes, when a state of rest, resembling in figure the Egyptian sphinx holding on to the tree with its hinder feet, and raising its foreparts and curved neck, and hence its name.'

Mexican Clover.—We have received from Mr. A. Phelps, of New-Orleans, a few seeds of a kind of clover, said to have been found near the city of Mexico. Mr. P. thinks it is superior to any clover in the United States. The seeds have been sown, and if they vegetate, the plants will be fairly tried.

Farmer's Cabinet.—We learn from the June number of this paper, that its publication will be discontinued at close of the present volume, (next month,) and that arrangements have been made by which subscribers to the Cabinet will be supplied with the American Agriculturist in its stead.

Superior Materials for Painting.—We have received from Mr. Richard Dally, of New-York, samples of white lead and linseed oil, as prepared by him for painting. The mode of preparation was noticed in our number for January last. For further particulars see advertisement in this number.

Castor Oil.—A "Subscriber" wishes to obtain information in regard to what machinery, and the cost of the same, is necessary to express, without heat, the oil from the castor bean—the apparatus to be calculated for the manufacture of twenty to thirty barrels of oil per year. We shall feel under obligations to some person engaged in this business, if they will furnish the information desired.

Powdered Charcoal.—Mr. Charles Colby, of Meriden, New-Hampshire, states that he applied six bushels of charcoal, ground in a mill, to an acre of potatoes, putting it in the hill at the time of planting. He thinks it prevented the "rot." We have no doubt that charcoal is a good antiseptic, but it does not appear from Mr. Colby's account, that the preservation of his potatoes was owing to the application of this substance. To be sure, the potatoes were sound, and so they were in many instances where nothing was used; and we have often seen the "old tubers" as sound as his are represented to have been, where nothing but ordinary manure was applied. If he had put the charcoal in alternate rows only through the piece, leaving the rest untouched, the precise benefit of the charcoal might have been known.

Draining Pipes.—A correspondent at Paterson, N. J., informs us that the draining pipes, spoken of in our May number, are sold by W. K. Price, Middletown Point, Monmouth county, N. J., $16 per thousand pipes, each pipe a foot long. Two "flats," or soles, are necessary to each pipe, and these cost $2 to $4 per thousand; "so that 1000 feet of pipe drain will cost about 18 to 20 dollars."

Spruce Shingles.—Inquiry.—E. M. Hoyt, of New Haven, Vermont, asks: Can you or your contributors inform us how to render spruce shingles durable in a roof? Spruce is sawed into shingles in our mountain towns, and furnished to us at a low price. They rot, so that the roof becomes leaky in from seven to ten years, depending much upon the steepness. Have any experiments been tried of immersing them in oils, or other liquids, to add to their durability? If so, will you please communicate the results of such experiments, cost, &c.

Manufacture of Agricultural Implements.—The Boston Traveller notices the implement manufactory of Messrs. Prouty & Mears, in South Boston, Mass. An account of this establishment was given in the Cultivator for 1845, pp. 44, 45. We are glad to hear that the concern is still in a flourishing condition. The improvements of Messrs. P. & M. in the construction of the plow, and other implements, have been of great importance to the cause of agriculture.

A Good Horse.—A physician of Hampshire county, Massachusetts, thus describes one of his horses in the *Spirit of the Times:* "He is a chestnut sorrel with white snip, fourteen hands high, and seventeen years old this spring; came from Canada twelve years ago, and appears like a Morgan horse. Since he was broke, he has never been out to pasture a day; never been lame a day, or off his feet, and has travelled over these mountains, either to a heavy sulkey or a common buggy-wagon, over 120,000 miles. The owner says he has the "documents" to prove this, and that he is ready to back him to go a mile in three minutes any day when the roads are in fair order.

Fair and Plowing Match.—The Rochester *Daily Advertiser* furnishes an account of a fair and plowing match which took place at Avon, Livingston county, on the 27th of May last. Twelve teams engaged in the match, all of whom performed their work so perfectly, that it was difficult to tell who was entitled to the premiums. Large numbers of excellent oxen and steers, and several pair of fine horses, were exhibited. A large number of people, of both sexes, were in attendance. Great preparations are making for the *fall* fair, which is to take place at the same place on the 29th of September.

Appropriation of the Sales of Public Lands.—R. L. Colt, Esq., of Paterson, N. J., has petitioned Congress that a section of ten miles square of the public lands, shall be given to each state and territory of the United States, for the purpose of endowing an Agricultural College in each State.

Exports from the United States from July 1, 1846, to June 30, 1847.—According to a statement prepared at the Treasury Department, it appears that the exports from this country, within the dates above mentioned, were as follows:—Flour, 4,382,496 bbls.; Wheat, 4,399,951 bush.; Indian Corn, 16,326,050 bush.; Corn Meal, 948,062 bbls.; Rye flour, 48,982 bbls.; Ship bread, 160,980 bbls., and 31,082 kegs; Rye, oats, &c., value $1,600,962. Total value of the above articles, $53,262,457.

Death of Pines at the South.—The South Carolina papers speak of the death of pine trees in that section. Immense numbers of them are said to have suddenly perished, and the cause has not yet been discovered.

Feeding Sheep.—The following are results of experiments recently made in Germany. The value of the Ruta baga compared with potatoes for sheep, is as 7 to 2; for the growth of wool merely, as 20 to 17.

Sheep kept without shelter, required more food than those in good ventilated sheds, as 30 is to 22; while the sheltered animals increased more rapidly in weight than the others, as 3 is to 1.

Precision.—In Kentucky, a "barrel" of corn is five bushels of the shelled grain. In New-Orleans, it is a flour barrel full of ears. A barrel of flour is seven quarters of a hundred weight, or 196 lbs. A barrel of tar is 20 gallons. A barrel of gunpowder is only a small keg holding 25 lbs. At Chicago, lime is sold by the barrel, where the smallest sized cask that is called a barrel, will pass muster.

Corn Crop.—The corn crop of the United States, according to the estimate of the Commissioners of patents, for 1847, was 540 million bushels—being about four times in value the whole production of cotton.

Eggs.—The egg trade of Cincinnati amounts to nearly three million dozen annually. One half are sent south—the rest consumed.

Excrements of Birds—The excrements of birds, both from the kidneys and the intestinal canal, are voided together; the dung, therefore, contains both phosphates and ammoniacal compounds, so essential in the formation of gluten and other nitrogenized matters of crops. It is only by both the solid and liquid excrements of animals, that the inorganized constituents of plants are represented. This is probably the reason why guano is so powerful a manure.

Analysis of Urine.—The following are analyses of the urine of cows and horses, the former made by M. Brande, and the latter by Fourcroy and Vauquelin:

Cows.—	Phosphate of lime,	3
	Muriates of potassa and ammonia,	15
	Sulphate of potassa,	6
	Carbonate of potassa and ammonia,	4
	Urea,	4
	Water,	65
		97
Horses.—	Carbonate of lime,	11
	" soda,	9
	Benzoate of soda,	24
	Muriate of potassa,	9
	Urea,	7
	Water and mucilage,	40
		100

Iron and Gallic Acid.—When a piece of iron is driven into a stick of green oak, a blue colored stain is frequently seen on the wood. This is caused by a union of the gallic acid of the oak with particles of iron. It is, in fact, genuine ink, and only needs to be combined with a little gum arabic to give it a body, to be used in writing.

Case-hardening Iron.—H. Webster gives the following account in the *Prairie Farmer*, of his mode of case-hardening iron, which he has found by twelve years experience to be superior.

Take one part of oxalic acid and two parts prussiate of potash; pulverize them together, and put them upon the iron when red hot—hold the iron in the fire to dry. If it is desired to harden very hard, repeat the operation several times. The iron does not need to be kept from the air, as by the old process of hardening.

The Horticulturist.—For prospectus of the 3d vol. of this work, see advertising pages. The first No. (for July) of the new vol., will be one of the most interesting yet published.

The Season and Crops.—April was quite dry, but in other respects was not unfavorable to vegetation; and the rains which set in with the first week of May, brought out more abundant and richer foliage than is usually seen. Grass and winter grain made a luxuriant growth, though the prevalence of cloudy and damp weather produced too much succulence of the stems to give the strength to support the grain in the best manner. The latter part of May, and fore part of June were remarkable for cold and moisture, as well as for very high winds. Frost occurred in many places on the first of June, and in some places on the thirteenth; though the injury by frost was less than that caused by the cold winds, which had a blighting effect on some tender fruits and plants. On the fifteenth of June, the weather became suddenly hot, the mercury ranging, for several days, from 88° to 96° in the shade. So great a degree of heat, with seasonable rains, has caused a rapid advance of all crops. Hay will be very heavy; winter wheat will be good, if it escapes rust, and has favorable weather to ripen; the same may be said of rye. Oats and barley look well; Indian corn is rather backward. In this vicinity, there is an entire destitution of peaches, plums, and fine cherries; but mid-way between this and New-York, cherries were abundant; and in New-Jersey, we hear peaches are plenty. Apples and pears are generally well set, though there is considerable appearance of blight on the trees, and many fine pears have nearly perished this season.

The wheat crop at the south and west is generally spoken of as good.

Hogs in the West.—The number of hogs slaughtered in the valley of the Mississippi last year is stated to have been 1,500,000, a fourth of which were put up for market in Cincinnati. The *bristles* from these hogs are estimated to be worth 50,000 dollars. Eleven millions of pounds of lard from them is calculated to have been run into lard oil. This oil is exported to the Atlantic cities, and to foreign countries. It is used in the Eastern States for the adulteration of sperm oil, and in France it is used to adulterate olive oil, the skill of the chemists being such that they are able to incorporate 65 to 70 per cent of the lard oil with that of the olive.

Good Farming in Ohio—A correspondent of the Ohio Cultivator, says: "I always plant my corn on a clover lay or stubble, and apply all the manure I can collect, which is no very small quantity, as I manure for no other crop. I do not pretend to know all about farming, but I do know that I raise about *one-third more* corn to the acre than I did 35 years ago, when I tilled the virgin soil, while I see the once fertile river bottoms falling off nearly one-half."

To destroy the Wire worm.—S. Davidson, of Greece, Monroe county, N. Y., states in the Genesee Farmer, that he successfully destroys the wire worm, and other insects, by covering the ground two or three inches with straw, where it remains two or three weeks to settle. During this time the worms work on the surface, under the straw. On a dry day the straw is burned, destroying worms and eggs. This remedy was applied to a part of a field, "full of wire worms." Where the fire went, there has been no appearance of wire worms; on the rest of the field they continued abundant.

Potato Disease—New Remedy.—Dr. Klotsch, of Berlin, is to receive 2000 thalers, (about $1,400,) for a new remedy for the potato disease. It consists, in substance, in pinching off the tips of the shoots, in the fifth, sixth, and seventh week after planting, when the plants are six to nine inches high. Only half an inch of the tips are removed, a greater portion is injurious. This causes an increase in the direction of the root, strengthens the leaves and stalks, while the action of the sun's rays is mitigated by the thickened foliage. Rows which were selected for experiment, were readily distinguished from the others, by their more numerous branches, and larger and darker foliage. Much success has attended this experiment, after various repetitions.

U. S. Crops.—The Commissioner of Patents says, the quantity of grain of all kinds exported during the year, ending Sept. 1, 1847, was 41 million bushels. Of this, about 20 million was wheat, 20 million corn, and the rest rye, barley and oats. The whole wheat crop, 114 million of bushels, and corn 540 million bushels.

Time for Budding.—As a general rule, the best time for this work, is when the bud has become fully matured or full grown, and when at the same time the bark of the stock will peel freely.

Chess.—A correspondent of the Ohio Cultivator, says, Go among the best wheat shocks at harvest, and select the largest and best ears for seed—sow the wheat on a piece of perfectly clean ground for seed another year. By this means, if proper care is used, "the seed will be quite clean, improved in quality, and will not *turn to chess*. I have tried this plan and have not had a spear of chess in the crop."

Rotation.—A good farmer in Ohio, who has rendered his farm richer, while others around him have been making theirs poorer, has adopted the following rotation:—

1st year, Corn, well manured after clover,
2d " Fallow,
3d " Wheat,
4th " Corn,
5th " Oats, with clover, then pasture 3 years.

Sweet Potatoes for Stock.—A writer in the Southern Cultivator, housed last fall, *two thousand bushels* of sweet potatoes from ten acres of ground. He used them for fattening his hogs, which were fed almost exclusively on boiled potatoes, and he says he never saw hogs thrive better. He also fed them cooked with turneps to working steers and milch cows with much success.

The Wool Market.—Samuel Lawrence, the greatest wool purchaser and manufacturer in the country, says, "the business of wool growing in this country, is destined to be of immense importance, and I am firm in the belief, that *within 25 years, we shall produce a greater quantity than any other nation;*" and he adds, "there is not enough annually raised in the country, by 10,000,000 to meet the demand of the manufacturers."

Profits of Draining and burnt Clay.—At an agricultural dinner at Robert Peel's, last autumn, — Woodward, an eminent practical farmer, stated that some undrained land had come into his occupation, heavy land which only produced 10¼ bushels of wheat to the acre—it was drained three feet deep, subsoiled, and dressed with burnt clay, and the first year he obtained from it 51 bushels. He regarded the burning of clay as a most important practice, rendering the soil more friable and convertible, and worked with much less horse-labor—[and particularly applicable to heavy land.]

Culture of the Cranberry.—Sullivan Bates of Norfolk county, Mass., who has had very extensive experience with the cranberry, says, "As far as I have ascertained, there are three varieties of the cranberry, viz:—the Barberry, the Cherry, and the Bell. I have never known any other variety of the berry that would naturalize to dry soil, except the Bell cranberry; this grows much in the shape of an egg, it is inclined to grow in the wild state, on the borders of cranberry bogs, spreading its way to upland soil—it is much larger than the others in its wild state. He recommends to those desirous of successfully cultivating the cranberry, to try the plants on different soils of the same farm, to ascertain which is best—that which is best for the potato being usually suited to the cranberry. It becomes larger by cultivation—and yields from 150 to 400 bushels per acre.

Wash for Buildings.—The following composition is said to be not only protective against fire, but to render brick work impervious to water. Lime is slacked with hot water in a tub to keep in the steam. It is then passed, in a semi-fluid state, through a fine sieve. Take six quarts of this fine lime, and one quart of clean rock salt for each gallon of water, the salt to be dissolved by boiling, and the impurities to be skimmed off. To five gallons of this mixture of salt and lime, add one pound of alum, half a pound of copperas, three-fourths of a pound of potash added gradually, four quarts of fine sand, or hard wood ashes, and coloring matter to suit the intended purpose. It is applied with a brush. It looks as well as paint, and is as lasting as slate.

Artesian Wells.—The deepest boring in the world is at Mondorf, which is 2200 feet deep—and from which, in consequence of the progressive increase of heat in descending, every where found, the water is 95 degrees Fah. or nearly blood heat. The boring at Grenelle, Paris, is 1794 feet deep, and discharges 20 barrels per minute, with a force strong enough to rise 50 feet above the surface.

Old and New Clover Seed.—A correspondent of the American Farmer, says that clover seed at the second year has not lost its vegetating power, though from the increased hardness of the shell, it sprouts more slowly, a difficulty removed by soaking the seed 24 hours before sowing, in salt water, at 120 degrees Fah. and then rolling it in powdered lime or gypsum.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, June 16, 1848.

FLOUR—Genesee per bbl. \$5.50*a*\$5.75—Georgetown \$6*a*\$6.12½.

GRAIN.—Wheat, red, per bu., \$115*a*\$120 (dull)—Corn, northern, 56c.—Rye, 72c.—Barley 65*a*75c.—Oats, 42*a*43c.

BUTTER—Orange County, per lb., 18¾*a*20c.—Western, dairy, 15*a*16 c.

CHEESE—per lb., 6¼*a*7c.

BEEF—Mess, per bbl., \$10.37*a*\$10.50—Prime \$6.

PORK—Mess, per bbl., \$10.50—Prime. \$8.

HAMS—Smoked Western, per lb., 5*a*9½c.

LARD—in kegs, per lb., 7¼*a*8c.

HEMP—Russia clean, per ton, \$230.—American dew-rotted, \$130*a*\$125.

HOPS—First sort, per lb., 5*a*7c.

COTTON—Upland and Florida, per lb., 4¾*a*7c.—New Orleans and Alabama, 4¼*a*8c.

WOOL—(Boston prices.) June 17.

Prime or Saxon fleeces, washed per lb........	42*a*45	cts.
American full blood fleeces,..................	38*a*40	"
" half blood do	30*a*32	"
" one-fourth blood and common,.....	28*a*29	"

There is no foreign demand for breadstuffs, and sales are dull at quotations. Wool is unsettled—the manufacturers are making but few purchases, in consequence of the influx of foreign cloths.

DURHAM CATTLE FOR SALE AT AUCTION.

THE subscriber having purchased of Mr. James Gowen, his numerous herd of Short Horn Durhams—the character of which is too well known to require comment—and being desirous of adopting, for the benefit of his pupils, a more general system of culture than is practical with the keeping of so large and increasing a stock of cattle, will sell some twelve or fourteen head, at public auction, on Wednesday, the 12th of July 1848, at the Rising Sun Hotel, on the Germantown road, near Philadelphia.

The stock to be sold will consist of Cows with calves by their sides, Cows in calf, all good aged—principally young. One very fine bull, four years old. Yearling and two years Heifers, and bull and heifer calves from five to eight months old.

Descriptive Catalogues given at the sale, which will be positive and without reserve.

Mount Airy Agricultural Institute, } JOHN WILKINSON.
Germantown, May 28th, 1848. }
July 1—1t.

Answers to Inquiries.

Oyster Shell Lime—"Hampden," Mass.—This article is worth in Albany, six cents per bushel, fresh burnt.

Pear Trees.—"H." We are not apprised of any special advantages that would follow from taking pear trees at Rochester instead of Boston, for your location, unless *better* trees could be had at the former place.

Culture of the Blackberry.—"J. W. J.," Philadelphia. We have no better information in regard to the culture of the blackberry, than that given by "W. H." page 151, current volume.

Culture of Hoarhound.—J. B. T., Wayne Co., N. Y. Hoarhound is cultivated at the "herb establishments" in this vicinity. We are unable to state the amount of profits it yields per acre, or the mode of preparing for market. These facts could probably be obtained from the "United Brethren," called Shakers.

Red top Grass.—S. J. W., Murfreesboro' N. C. Red top is adapted to a moist soil, and we should think would suit the mountain region of North Carolina.

Influence of Brick-Yards on Fruit Trees.—R. D. T., Oswego. We are not aware that any new light has appeared in regard to the effect on trees of gases arising from brick yards. We see no reason to believe, however, that the ordinary blight of fruit trees has any connexion with that cause.

SALE OF STOCK AT BUFFALO.

I WILL sell at the State Cattle Show in September next, at Buffalo, about 30 thorough bred Short horns, consisting of cows, young bulls, heifers, and calves.

Also, 30 thoroughbred Durhams of like description.
Also, 30 " Cotswold Sheep, (long-wooled) ewes & rams.
30 " Southdown Sheep, (middle-wooled) of same sexes.

Catalogues and pedigrees of the stock will be on the show grounds where the animals will be exhibited.

The character of my stock is generally known—and I shall offer it all indiscriminately to the public, making no reservations for my own use.

Black Rock, June 13, 1848—2t. LEWIS F. ALLEN.

ANNUAL SALE OF BUCKS,

Near Delaware City, Delaware.

CLAYTON B. REYBOLD begs to inform the public, that he will offer for unreserved sale, at auction, on Wednesday, 2d of August next, Twenty-five Long-Wooled New Oxfordshire Yearling Bucks, which he believes *superior in all points* to those disposed of at his former sale.

The subscriber would also remind the public, that the New Oxfordshire Buck, which took the first prize for the best Long-wooled Sheep at the Saratoga Meeting, in the fall of 1847, is the sire of the Bucks intended for sale.

C. B. Reybold will be pleased to see any gentleman who will favor him with his company.

Sale to commence a 2 o'clock.

Marsh Mount, June 8th, 1848.—1t.

SCIONS FOR BUDDING,

At low prices,

FOR Sale by J. J. THOMAS, at his nursery in Macedon, including most of the varieties of apple, cherry and peach, *all proved by bearing*, at \$2 to \$5 per thousand buds, where quantities are taken, and an additional discount on large orders. Several new varieties of fruit furnished in smaller quantities at moderate rates. Bundles packed for sending by express, so as to keep fresh a week. Applicants stating the varieties and quantities wished, will be furnished with distinct prices. All communications to be post-paid, and orders to be accompanied with remittances, or satisfactory references.

Address, J. J. THOMAS, *Macedon, Wayne, Co., N. Y.*
July 1—2t.

IMPROVED STOCK FOR SALE.

THE subscriber will take orders and execute them in the best possible manner, for—

Durham, Hereford, Devon and Ayrshire cattle. Price from \$50 to \$300 each, according to age and quality.

Saxon, Merino, Southdown, Leicester, and Cotswold sheep. Price from \$10 to \$30 each.

China, Sussex, Berkshire, and Lincoln pigs. Price per pair at three months old for the three first mentioned breeds, caged and delivered on board ship, \$20. Price of the Lincolns, \$30 per pair. These last are of a recent importation—color white, and grow very large.

All orders must be accompanied with the cash.

SAMUEL ALLEN,
mjulysept. 189 Water-street, New-York.

DURABLE PAINTS.

RICHARD DALLY, Painter, No. 1 Burling Slip, New-York, has commenced the preparation of Paints and Oil for sale, with especial reference to durability. Twenty-three years experience enables him to adopt invariably, the only means by which permanence is secured. July 1—1t.

FARM FOR SALE AT A BARGAIN,.

CONTAINING Two hundred and thirteen acres, six miles west of Batavia, Genesee county; one hundred and sixty acres under good improvement; balance about equally divided in good rail and hard timber, with good sugar orchard. Soil good for grain or grass. Three large barns with stabling attached for fifty horses.—Story and half house, kitchen and wood shed attached. Buildings all nearly new and in good condition. Ten per cent. down, the balance can remain on a long credit. For any further information, address, (post paid,) H. HUNTER, Rochester City, N. Y.

July 1—ju. & sept.

FOR SALE.

THE LINNÆAN BOTANIC GARDEN & NURSERY. Late of Wm. Prince, deceased, *Flushing, L. I., near New-York.* Winter & Co., Proprietors. In consequence of the decease of his Son and Partner, and of the advanced age of the Subscriber, he offers for sale this ancient and well known Nursery, densely stocked. Its location, celebrity for more than fifty years; established business; extensive variety of fruit and ornamental Trees, Shrubs and Plants, as well for immediate as future sales; stock of specimen Trees, &c., to propagate from; extensive greenhouses, dwellings, and other conveniences for conducting the business, all in high order; the beauty of the village, and its vicinity to the city of New York, with which there is communication several times a day by Steamer and Stages; afford very superior advantages to any person disposed to pursue the business.

The execution of Orders will be continued–Descriptive Catalogue *gratis* on application, *post paid.* GABRIEL WINTER.

July 1, 1848.—2t.

MOUNT AIRY AGRICULTURAL INSTITUTE.

THE subscriber having rented the Mount Airy Farm, the late residence of James Gowen, Esq., with all its exten[illegible] and eligible appliances for the purposes of a *Farm School* removed his school, the Duchess Agricultural Institute of Duchess Co., N. Y., to the above place, where he opened for the summer term on the first Tuesday of April last.

The winter term will commence on the first Thursday of October. This farm, which is located on the Germantown road, 7 miles from Philadelphia, Pa., having been so long known as the model farm of the United States, the site being proverbially beautiful and healthful, a minute description is deemed unnecessary; suffice it to say, that it presents every inducement and desirable facility for the establishment and maintenance of an Experimental, Practical and Scientific Agricultural Institute.

The course of instruction will be such as to give the students every facility for acquiring a thorough knowledge of Scientific and Practical Agriculture, with the use of the best modern farm machinery and implements, together with a select farmer's library, including numerous Agricultural Periodicals. Instructions will also be given in all the collateral branches requisite to insure the great desideratum which it was the object of the founder and Principal to supply by an education commensurate with the exalted destinies of a landed interest.

Chemistry and the other Natural Sciences receive particular attention—lectures with full experimental illustrations being connected with each course. The Zoonic course will commence with the Horse, a perfect skeleton of which being provided for illustration.

The best facilities are also afforded, that those who desire may here acquire a Commercial Education, to the end that they may lay the foundation in youth of a future life that shall be agreeable, healthful and useful.

Fee for the year, $200, payable semi-annually in advance. This sum includes Tuition, Board. Washing, Fuel and Lights. An extra charge of $12 00 per annum will be made for pupils not furnishing their own bedding and toilet furniture. The modern languages $10 each extra per term. as also for drawing.

This Institution is under the patronage of the American Agricultural Institute, the Farmer's Club of the American Institute, and the Duchess Agricultural Society.

For further particulars address JOHN WILKINSON,
Principal of the Mount Airy Agricultural Institute, Philadelphia, Pa.

REFERENCES.

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July 1—1t.

HORSE POWERS.

FARMERS in want of good Horse Powers and Threshing machines, will find them at the Albany Agricultural Warehouse and Seed Store. For description and recommendations, See Feb. No. of Albany Cultivator, for 1847 & 1848—also May No., 1848.

Descriptive Catalogue gratis.

SALE OF SHORT HORNED CATTLE.

I WILL Sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers, and young Bulls. A catalogue with their pedigrees will be ready at the time of the fair.

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and six South Down Rams.

References—A. B. Allen, N. York; Sanford Howard and B. P. Johnson, Albany; Francis Rotch, Butternuts; and L. F. Allen, Black Rock. JOHN M. SHERWOOD.

Auburn, May 16, 1848.—4t

AMERICAN AGRICULTURAL WAREHOUSE AND SEED STORE.

S. C. HILLS & Co, No. 43, Fulton Street, (removed from 189 Water Street) offer for sale, Prouty's Ploughs and Horse Rakes, Mayher's and Moore's Ploughs, Corn Mills, Corn Shellers—Catchpole's very superior Stalk and Straw Cutters, Hovey's do. do., Grain Cradles, Churns, &c. &c. Also, Garden and Flower Seeds, raised by the Shakers, and warranted good; Fruit and Ornamental Trees and Shrubbery, supplied on short notice.

June 1, 1848.—3t

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen. H. L. EMERY.

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost. Clark Lewis, 2d.

German, Chenango Co., N. Y., April 15, 1848.

THE OLD MORGAN GIFFORD.

THE highest blooded Morgan Stallion, now remaining, will stand this season at the Stable of F. A. Wier. in Walpole, N. H.

Terms, $25, five dollars of which to be paid at the time of service, and the remaining $20 if the mare proves in foal. Pasturage furnished as usual.

FRED. A WIER.
ELISHA DeWOLF, Jr.
AMBROSE ARNOLD,
} Committee of the Proprietors.

June 1, 1848.—3t*

KINDERHOOK WOOL DEPOT.

THIS enterprise having met the expectations of its projectors, will be continued upon the following principles:

The Fleeces will be thrown into *sorts* according to *style and quality.*

A discrimination will be made between wool in good or bad condition.

All who desire it, can have their clips kept separate.

Sales will be made invariably for cash.

The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25c. on $100 for a term of three months.

Liberal advances in cash made on the usual terms.

Arrangements have been made with Manufacturers using different grades of wool, to purchase the various sorts at their market value soon after being received at the Depot If the opening market price is not satisfactory, the wool will be offered for sale a such time as the owner may direct.

Reference can be had to

Dr. J. P. Beekman, Kinderhook; D S. Curtis, Canaan;
C. W. Hull, New Lebanon; J. B. Nott, Esq. Guilderland;
C. H. Richmond, Esq., Aurora; Col. J. Murdock, Wheatland,
B. P. Johnson, Esq., Sec., [N. Y.;
N. Y. St. Ag. Soc. Albany.

H. BLANCHARD, Agent.

Kinderhook, N. Y., June 1, 1848.—3m

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

VALUABLE BOOKS

For sale at the Office of the Cultivator:

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c &c.

F. A. GIFFORD.

Hudson, May 9, 1848—5t*

NORMAN or MORSE'S GRAY.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15¾ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500. The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner, Mr Morse *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I T. GRANT P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

16,000 IN ONE YEAR.

COLE'S American Veterinarian,

OR

DISEASES OF DOMESTIC ANIMALS.

A Book for every Farmer!

AND a book which every Farmer should own and may own, by paying the small sum of FIFTY CENTS, which may be the means of saving the life of many valuable animals, and from which he may derive a vast amount of the most valuable information in regard to the Training and Breeding of Animals, as well as full Rules for Restoring and Preserving Health.

16,000 COPIES

of this valuable work have been sold in ONE YEAR.—and we have testimonials enough in its favor, from those who have purchased and examined it, to fill a volume. We publish a few only.

"No Farmer's Library is complete without Mr. Cole's Treatise on the Diseases of Domestic Animals."

From William Bacon, Richmond.

This book is just what farmers want. The prescriptions are simple, always accessible, and harmless to the constitution.

From the Christian Herald, Newburyport.

It is truly "a book for every farmer." We have been most astonished at the amount of important information and instruction which it contains, on the training, breeding, and diseases of domestic animals. It is compiled by one of the best agricultural writers in the country, from his own experience and observation, as a practical farmer, and conductor of agricultural papers.

From Wright's Paper, Philadelphia.

"Cole's American Veterinarian," is an invaluable book It is worth its weight in gold to any person having the care or charge of domestic animals An agricultural friend, to whom we gave a copy, observed that it would save him a hundred dollars a year.

From the American Agriculturist.

The farmer will find much valuable information in this little work. By reference to its directions, they may be able to save a valuable animal, which otherwise might be lost.

From J. M Weeks, Vermont.

The American Veterinarian is the best book of the kind that I have ever seen.

From Levi Bartlett, New-Hampshire.

This book should be in the library of every farmer.

From the Farmer's Visitor, by Gov. Hill, N. H.

As the Editor of that excellent agricultural paper, the Boston Cultivator, and other kindred works, Mr Cole has shown himself well qualified for the compilation of this work. We have known him for years, and he has proved himself to be one of the most persevering and able of our agricultural editors We understand his new book has already had a free and extended sale. Many times its price to almost any farmer, may be saved in its purchase.

Published, and for sale at wholesale and retail, by

JOHN P. JEWETT & CO.
23 Cornhill, Boston.

100 agents could make money on this book in various sections of the country. None need apply except those who can command a small cash capital of from $25 to $50. Address, *post-paid*, the Publishers, *23 Cornhill, Boston*

For sale at the office of "THE CULTIVATOR." June 1—3t.

SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England,) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.

Troy, May 1st. 1848—4t.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent. lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction.

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers. E. J. BURRALL.

Geneva, April, 1848—6t.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required

Room No. 1, Sun Buildings. A. R. HAIGHT.
March 1—5t*. 107 Fulton-st. New-York.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles as small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

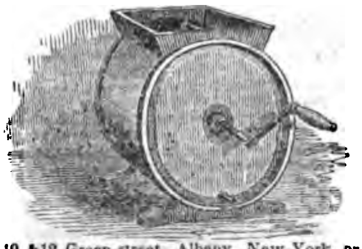
P. S Fluid Cataracts removed without an operation.

April 1—4t.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,

May 1, 1848—6t. Cabotville, Mass.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos 10 &12 Green-street, Albany, New-York, or by mail.

June 1, 1848. H. L. EMERY.

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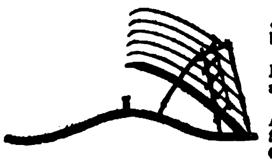
GUANO FOR SALE.

NOW landing from ship Aglare, a very superior cargo of Patagonian Guano. Price $35 per ton, for all quantities exceeding 1,000 lbs. Apply at the New-York Agricultural Warehouse and Seed Store, Nos. 189 & 191 Water-street, New-York.
July 1, 1848.—2t. A. B. ALLEN & Co.

HAY AND HARVEST TOOLS AND MACHINES.

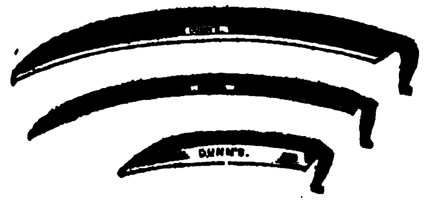
EVERY Farmer desiring good tools (and where is one who does not) should examine the large collection of the leading and best manufactures at the Albany Agricultural Warehouse Nos. 10 & 12 Green street, Albany—among which may be found,



Wilcox, Grants, & Myers & Bryans Cradles, the three best makers known.

Wilcox & Downer's Horse Rakes, all sizes; a better made article than ever sold here.

Dunn's, Phillips, Messer and Colby's Celebrated Scythes, of German, Shear Cast and Silver Steel; warranted the best kinds in use.



Lampson & Co's. & Clapp's Patent Scythe Snaths.
Dean's, McCollum's, Wakefield's and other hand rakes.
Real Quinnebaug, Cummington & Indian Pond Scythe Stones.
Nova Scotia and Ohio Grind Stones, all sizes.
Grindstone Cranks, Rollers, &c.
Austin's, Anson's. Darby's and others, scythe rifles.
Grant's Fanning Mills, 4 sizes.
Partridge's Hay Forks, 6 sizes. Warranted not to break, and the best fork in America

Wheeler's Horse Powers and Threshers. These are too well known to need further notice here; except to refer to the February Nos. of the Cultivator, for 1847 and 1848, and to the May No. 1848.

A full and complete assortment of all the above, and an extensive assortment of almost every article used on the farm or in the farm house, constantly on hand—making this Agricultural Warehouse literally an Agricultural museum, where a farmer can well spend an hour or two, and feel well paid for his trouble in calling. For prices, description, &c., see Catalogue Agricultural Warehouse, gratis at Store, or by mail. HORACE L. EMERY.
July 1, 1848.

THE HORTICULTURIST,
AND
Journal of Rural Art and Rural Taste.

Edited by A. J. DOWNING, Esq.

THE Third Volume of the Horticulturist commences on the first of July, 1848.

The Publisher, at the close of the 2d volume, desires to return his thanks for the handsome patronage bestowed on this work. It has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. Its influence on the progress of Gardening, and its information in matters of Rural Taste, is already strikingly apparent. Its extended and valuable correspondence, presents the experience of a large body of the most intelligent cultivators in America; and the instructive and agreeable articles from the pen of the Editor, make it equally sought after by even the general reader, interested in country life.

In order to introduce still greater improvements in the work, and especially in its illustrations, the publisher takes this method of presenting it in various parts of the United States, where it is not already known, and where he is confident that it only needs to be examined, or even announced, (such is the popularity of Mr. Downing's works,) to be at once ordered.

The work is published monthly in 8vo form, of 48 pages—each number accompanied by a frontispiece and several other engravings. The list of constant contributors embraces our first horticulturists and practical cultivators. The "Foreign Notices" present a summary from all the leading Horticultural Journals of Europe; the "Domestic Notices," and "Answers to Correspondents," furnish copious hints to the novice in practical culture; and the numerous and beautiful illustrations.—Plans for Cottages, Green-Houses, the Figures of New Fruits, Shrubs and plants, combine to render this one of the cheapest and most valuable works to country gentlemen on either side of the Atlantic.

NOTICES OF THE PRESS.

No one who loves the country will willingly be without Mr. Downing's Journal. In it he combines the merits of all his previous works. While informing the practical gardener as to his particular vocation,—the best sorts of garden fruits, vegetables, ornamental shrubbery, etc., and as to the best manner of cultivating each and all, he intersperses lessons of taste in rural architecture, of profit in rural economy, of knowledge at once useful and brilliant in botany, and of delight in all the branches of that most rational, independent, and healthful existence—life in the country.—*N. Y. Courier & Enquirer.*

The Editor of this attractive Journal has earned a wide renown by his elegant and most useful works on Landscape Gardening, Cottage Architecture, and Pomology. As an original and accomplished author in these attractive and popular pursuits, he has no rival since the death of the indefatigable Loudon; and his merits have been acknowledged by marks of high consideration from some of the crowned heads of the Old World.—*Sillimans' Journal.*

This magazine is printed and illustrated in beautiful style, at Albany. As to its character in other respects, it is sufficient to say that it is conducted by A. J. Downing, the most distinguished writer in the Union, on all topics connected with horticulture.—*Cincinati Gazette.*

We strongly recommend this excellent and useful work to all who are attached to rural pursuits, either for amusement or for profit.—*Montreal Gazette.*

Every one at all ambitious of keeping up with the improvements of the day, in gardening, should subscribe for this Journal.—*New-Orleans Com. Times.*

We have found much pleasure in assuring ourselves of just what we anticipated of the work in such hands, a *desideratum* for the *advancing* taste of the country in horticulture and rural architecture, to which the work is chiefly devoted. No person, perhaps, combines more harmoniously the scientific and the practical than the originator of this work.—*New-York Observer.*

TERMS—Three Dollars per year—Two copies for Five Dollars. To Agents, a discount of 20 per cent. will be made. ☞ All payments to be made in advance, and orders to be post-paid.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany, N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

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Payable always in advance.

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PHILADELPHIA—G. B. Zieber & Co., Booksellers:
Of whom single numbers, or complete sets of the back volumes. can always be obtained.

☞ Advertisements inserted in the Cultivator, at the rate of $1 per 100 words, for each insertion.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

Vol. V. ALBANY, AUGUST, 1848. No. 8.

BRIEF SKETCHES OF FARMS, &C.

We had the pleasure, in June last, of visiting a portion of the fine country on the Hoosic river and its principal tributary, the Walloomsac. Few districts are naturally more fertile than this, and none are superior to it in picturesque scenery. It was first settled soon after the close of what is commonly called the "old French war,"—the war which commenced in 1756, between France and England, each supported by their respective American colonies. In passing to and from lakes George and Champlain, many of the English and New England officers and soldiers, became acquainted with this neighborhood, and being resolved to avail themselves of its agricultural resources, shortly afterwards took up their residence here. It has long been considered a very desirable farming section, and its rural population is distinguished for independent circumstances and good farm management. The farmers, generally, seem to appreciate their advantages, and have no disposition to change their location. Consequently there are but few farms for sale; and the lands, of average quality, are nominally held at forty to sixty dollars per acre.

Surface and soil.—The surface is mostly hilly, and in parts mountainous—a portion of the Green Mountain range extending into the district—but the swells are large, and, except in a few instances, the slopes are so gradual as to admit of easy cultivation, and are not liable to be gullied or washed by rains. The soil is a loam mixed with the debris of slate, lime and trap rocks, and is very productive of the smaller grains, vegetables and grass. The alluvions, and some of the lighter hill-lands, produce large crops of Indian corn. Apples, pears plums and cherries, flourish in most places.

Wool-Growing.—But perhaps the most important product of the farms in this section is *wool*. Merino sheep were early introduced here, and at a later day, the late **Henry D. Grove** brought in some of the choicest animals of the best Saxon flocks, the blood of which has been disseminated in the vicinity, as well as other parts of the country, to the great improvement of the quality of the wool. The flocks of Messrs. **Rogers**, **Haswell**, and others, of Hoosick are well known. Mr. R. has lately disposed of his flock, of 1,000 head; he and his sons having purchased lands in Virginia, to which they are about to remove, where they intend to re-engage in wool-growing on a large scale, as soon as the requisite preparation can be made. We saw a portion of his flock with the wool, just taken off, and have seldom seen so large a number of fleeces of equal quality, and none that were put up in better order Mr. R. procured from Mr. **Patterson**, of Washington Co. Pa., about twenty rams, in the fall of 1844, and he thinks the cross from these has been of advantage to his flock—especially in imparting constitution and additional weight of fleece.

The farm of Judge Ball—his laboratory, &c. Our stay in the neighborhood did not admit of our making particular examinations of many of the farms. We called on Hon. L. C. **Ball**, who accompanied us to Bennington and vicinity. First, however, we took a view of his own place, with which we were well pleased. His residence is at Hoosic Falls, where he settled in 1833. His farm originally consisted of 400 acres, for which he paid $25,000, and made an additional outlay of some $12,000 for improvements. All the buildings and fixtures were erected under his immediate supervision, and are planned and arranged with judgment and good taste, combining in a great degree the advantages of beauty and convenience.

For several years Judge **Ball** carried on the whole of his farm—keeping from five hundred to seven hundred sheep, thirty to forty head of fine cattle, and six to eight horses—the sales from the farm amounting to $2,000 to $3,900 per year. But ill health has lately compelled him to relinquish the management of so much business; and on this account he has sold off 300 acres of land, reserving a homestead and 100 acres, which still gives a handsome farm.

Judge B. has for the last year or two devoted his time with as much assiduity as his health would admit, to chemical and other scientific investigations. He has just fitted a very complete laboratory, where he is now engaged in analyses, having reference to agriculture and its kindred arts. To this laboratory the student of the Ball Seminary, an excellent institution in the vicinity, have access; and Judge **Ball** gives, also, occasional lectures on the sciences connected with agriculture, before the pupils. The management of the school by Mr. **Verder**, the Principal, is highly satisfactory, and with the chemical department, under the care of Judge B., as an auxiliary, we have great confidence in its usefulness in imparting sound practical instruction.

We made a short visit to the very interesting mineralogical cabinet of Mr. **Lyman Wilder**, at Hoosic Falls. This is one of the most extensive collections of the kind in this country, and as an individual collection we believe it is exceeded by but few in the world. It comprises over 7,000 specimens of minerals, and their arrangement is on a plan, (original with Mr. W.,) which is at once curious and convenient.

In going to Bennington, we took the road leading up the valley of the Walloomsac. The farms along this stream are well cultivated, and for good buildings, fences, and neat appearance, are scarcely surpassed by any in the country. The stream, like the Hoosic, has many fine water privileges, several of which are occupied with establishments for the manufacture of cotton and woolen cloths, paper, &c.

Revolutionary reminiscence.—Judge Ball pointed out the ground, (over which we passed,) where the battle of Bennington was fought on the 16th of August, 1777. There were two engagements; the first being an attack and capture of an entrenchment of the British, by the Americans under Gen. Stark, and the second a rencontre between the same body of Americans and a detachment of Britons, who were marching to the relief of the other force. The latter battle was a mile or so from the first. The ground, in both cases, is on the New-York side of the line, in the town of Hoosic. On arriving at the Walloomsac House, in Bennington, we were quite surprised at finding the sword which belonged to Col. Baum, the officer who commanded the British forces on the occasion mentioned. It will be recollected that he was mortally wounded and taken prisoner in the battle. The interesting relic referred to, is the property of Mr. G. W. Robinson, who gave us the following history of it. When Col. Baum was carried off the field, his sword was taken by one of the men who assisted in that duty. This man afterwards sold it to Gen. David Robinson for two dollars, *Continental money*. The sword has since been kept in the family of Gen. R., and is, together with the scabbard, in a good state of preservation.

Manufactures.—The village of East Bennington is the seat of considerable manufacturing business. Iron ore abounds in the vicinity, and a company at this place makes 2,000 tons of iron per year. There is, also, a large quantity of yellow ochre, which is used in painting, obtained here. From 600 to 800 tons of this article are sold annually, at an average price of $18 per ton. But the most important description of manufactures carried on here, is that of crockery ware. The establishment is owned by Messrs. Lyman, Fenton and Park, and has been in operation four years. The ware consists of the following kinds: Yellow Fire-Proof, Dark Lustre, or Rockingham, and White Flint ware. All the varieties are of superior quality—said to be equal to any imported. The sales amount to $40,000 to $50,000 annnually. The materials used are mostly obtained in the vicinity of Bennington. The works employ forty hands, who were obtained from the Staffordshire potteries, England. Messrs. L., F. & P. have lately made some experiments in the manufacture of fine porcelain, which have succeeded well. Inexhaustible quantities of the principal materials required for this kind of ware, have been found, and it is in contemplation to embark extensively in its manufacture. A few more experiments will be made. in order to fully settle its practicability; when, should results be favorable, large works will be erected, and two or three hundred workmen employed. The mineral called feldspar, which constitutes the basis of porcelain, has been found in abundance in Ashfield and Goshen, Massachusetts, and has been pronounced by those acquainted with the article, equal to any in the world. The purest quartz is obtained at various points in the Green Mountains.

Hoosic Falls is likewise a considerable manufacturing place. There are two cotton factories, which employ about 1,000 hands. Messrs. Wilder and Parsons have here a large manufactory of machinery of differennt kinds. They make about $14,000 worth per year.

THE COTSWOLD BREED OF SHEEP.

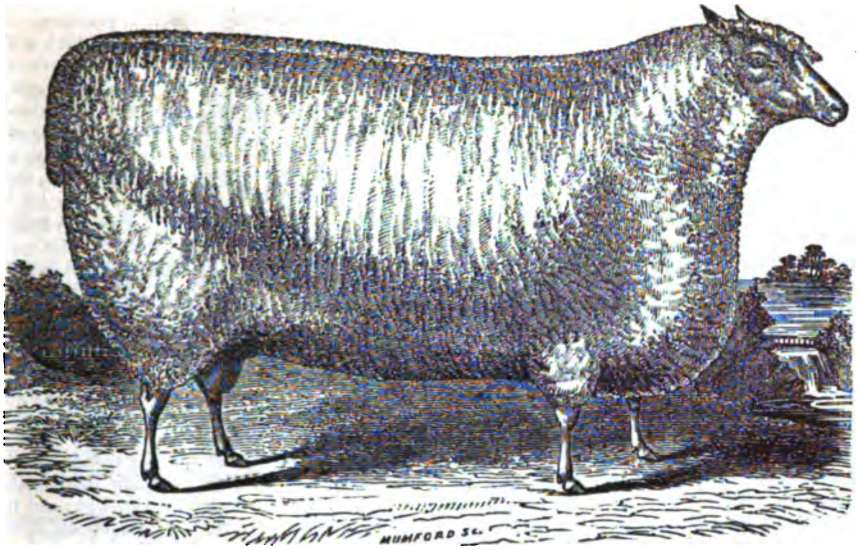
As this breed of sheep is now being disseminated to a considerable extent in various parts of this country, we have thought that a brief sketch in regard to their history would be read with interest.

The original stock from which the present *improved* Cotswolds were derived, has been known on the Cotswold hills, in Gloucestershire, England, for a great length of time. W. C. L. Martin, in his late work on sheep, (one of the series in "Knight's Farmer's Library,") gives an account of the breed, from which we give the following extracts. The name (Cotswold,) by which the breed is known, is said to have been derived from *cots* or *cotes* having been formerly erected in the district occupied by these sheep, for their accommodation. They consisted, we are informed, of "not only rude huts or sheds, but of extensive ranges of buildings, of three or four low stories, communicating with each other by means of gradually sloping ascents or pathways, so that the sheep had no difficulty in ascending to the topmost story. Thus no room was lost, and the most efficient shelter was provided for the flock either by day or by night, during the continuance of winter, or at the lambing season, or when it was deemed advisable to house."

The Cotswold breed, was, we are told, anciently held in such high estimation, that "in 1467, by permission of Edward IV, some of them were imported into Spain, not as some have supposed, to mingle with and improve the migratory fine and short-wooled Spanish sheep of ancient renown, but either to form the ground-work of a new long-wooled stock, or to improve some native long-wooled breed from which serge-like fabrics, requiring this kind of wool might be manufactured."

"The old Cotswolds were a large hardy race of sheep, big-boned and long-wooled, and well adapted for the hill range which constituted their stronghold. To judge from the relics still extant (though not pure,) they were flatsided, deficient in the forequarters, heavy in the hind quarters, slow fatteners, and covered with a long and weighty fleece; this latter being variable in quality, but always truly valuable as a combing wool. But the old breed is now more or less modified, and though it has not merged into the Leicester [or Bakewell breed,] is in many parts deeply imbued with the Leicester blood; in other parts, on the contrary, where hardiness is peculiarly essential, the cross of the Leicester has been only carried out so far as to give those improvements which we have more than once detailed, as the invariable result of even a single cross with this peculiar strain.

"According to the situation of his farm and the nature of his pasturage, does the Cotswold farmer manage his flock. Perhaps the prevalent breed may be half Cotswold and half Leicester. But in sheltered places and on good land, the strain of the Leicester may be found to predominate; while in more exposed situations the farmer, finding the Leicester cross tending not only to the diminution of the size of his sheep, and the weight of his fleeces, but to the loss of due hardiness and fertility, increases the Cotswold blood in his flock, and proceeds rather upon the principle of selection than of admixture to a rash extent, with the Leicesters. In both instances the farmer is right; in the one case, he has the means of feeding off rapidly, and he is content with the loss and a lessened weight of fleece; his profits arising from early maturity and from the capability of the land for feeding at a given time, more sheep of the crossed breed than the old, so as in reality, to return at a quick ratio a greater



New Oxfordshire Ram, imported by C. B. Reybold, Esq.

weight of mutton than formerly. To him wool is of secondary importance. The farmer whose land is exposed, and affords only a scanty pasturage, will find his profit rather in wool than in carcase; he could not, as respects the latter, compete, even if he would, with the farmer of the vale a few miles distant, but he will make up his profits in weight of wool. He therefore takes care that the old strain shall not prevail over the Leicester cross, (the benefits of which he is not altogether unwilling to lose,) and adapts his management to the circumstances in which he is placed. He does not lose sight of the fattening qualities and early maturity; but he as little loses sight of hardiness, fertility, and size, and of weight of fleece."

A breed which may, perhaps, be called a branch of the Cotswolds, has rather recently appeared in England, under the name of the "*New-Oxfordshires.*" They have been very successful competitors at the great shows of the Royal Society, and the Smithfield Club, for the prizes on "Long-wooled" sheep, as distinct from the Leicesters. One of the most celebrated breeders of this variety, is Mr. **Charles Large**, of Broadwell, Oxfordshire. From him Mr. C. B. **Reybold** of Delaware City, Del., obtained the two famous rams which he exhibited at the show of the N. Y. State Ag. Soc. at Saratoga, and the remarkable weight of which we mentioned in our April number.

Mr. **Robert Smith**, in a prize essay on the breeding and management of sheep, (written for the Royal Agricultural Society,) thus describes the New-Oxfords:

"They are of large dimensions, and have a great propensity to fatten, arising chiefly from their wide frame, quietude, and open texture of flesh, which is of quick growth, and consequently expands itself more rapidly than many others; but they do not possess that exactness of form peculiar to smaller animals, though they have a better carriage. For several years the male animals have been eagerly sought after, with a view to increase the size and frame of other long-wooled breeds."

HOW IT CAN BE DONE.

Eds. Cultivator—In the May number of the *Cultivator*, I noticed the remarks of Mr. Allen, with his very sensible request that the "Legislature of Connecticut, at their next session, would pass a law similar to the one in Massachusetts," for preventing animals from running at large in the highway. For Mr. Allen's sake, and for the comfort and convenience of all the good people of "the land of steady habits," we wish so too; and when we look at the fitness of the law, and its general influence on the well being of the farmer, we wish that it might be adopted by every state in the Union. Nor do we consider this wish vain, or one unlikely at some time to be realized.

The utility of such a law is unquestionable. It is the pledge of the public to guarantee individual rights in property, a portion of which is taken for public benefit. When a "highway is laid out," the only claim which the public make upon the premises, is the *right of travel and repair*. The right of soil with the grass and trees growing upon it, remain vested in the owner of the premises from whom the land is taken. This point is settled by common law of ancient date. Thus it is said: "Though every highway is said to be the King's, yet this must be understood so as that in every highway the King and his subjects may pass and repass at their pleasure."

"But the freehold, and all the profit of the trees, &c., belong to the lord of the soil, or the owner of the land on each side of the way." Also, "the lord of the soil shall have an action of trespass for digging the ground." See abridgment of common law, vol. 3, page 694. "Land covered by a highway may be recovered by a writ of ejectment," where the public abuse their right. Lord Mansfield in delivering the opinion of the court in a case of ejectment, says—"the King has nothing in an highway, but a passage for himself and his people, but the freehold and all the profits belong to the owner of the soil; so do all the trees upon it and mines under it, which may be extremely valuable." Mr. Justice Foster says—"the owner of the soil has *all above and un-*

der the ground, except only a passage for the King and his people." Thus far we quote the common law of England, and the opinions of her courts.

Judge Putnam, in giving the opinion of the court in the case of Stackpole & al vs. Healy, (vide Mass. Reports, vol. 16, pages 34, 35,) says—"I hold it to be clear that the public have no other right but that of passing and repassing; and that the title to the land, and all the profits to be derived from it, consistently with, and subject to the right of way, remain in the owner of the soil. The owner may maintain trespass for any injury to the soil, which is not incidental to the right of passage acquired by the people."

It is then given as the opinion of the court that "it is not lawful, therefore, for the public to put the cattle in the highway to graze. For whenever one would justify taking the property of another, in virtue of a license or a way, he must plead and prove that he used the way as a way, and not for any other purpose."—Judge P. then quotes the opinion of the English court as follows: If one drive a herd of cattle along the highway, where trees or wheat or any other kind of corn is growing, if one of the beasts take a parcel of the corn, if it be against the will of the driver he may well justify, for the law will intend that a man cannot govern them at all times as he would; *but if he permitted them &c., then it is otherwise.*"

Such then is the English common law in the matters of highways, and such are the opinions of her justices. Our statutes are in many instances very wisely based on those laws, and in accordance our learned chief justice Parker has given the opinion above cited. That such laws and such statutes are based on principles of strict justice to the public, who claim the right of way, and the individual through whose premises the way passes, cannot admit of a doubt. The public receive all they claim; all that can be of any service to them, in securing the right of travel and repair. They do not ask, as a public body, the right of pasturage, or of plowing and sowing or mowing. If they did, it would operate as an unequal right, which a part might enjoy, while others would have no oportunity or disposition to avail themselves of it. On the contrary, it is for the public convenience and public interest to leave this right of soil and its productions in the hands of the original proprietor, and further by good laws to protect him in that right. Where would the comfort or the safety of the traveller be, if all sorts of animals were allowed to run, indiscriminately, in our highways? Here, he might be exposed to the attack of a ferocious bull; there an unmanageable horse might blockade his path, and perhaps endanger his life. Many advocates of street pasturing, would no doubt say, keep *such* animals out, but let others run. But no. If our highways *are public pastures*, they have as good a right there as the innocent lamb. If they are pastures, they are pastures for every kind of farm stock. This is fully confirmed by the practice of the advocates of street feeding.

Street feeding is an encroachment on individual rights to an amount more than equivalent to all the benefits that can result from it. Many farmers would never on any consideration permit their animals to run at large. They choose, like thrifty men, to keep them in their own enclosures, where they are safe from the exposures to which animals running at large are liable, and where they are always sure to find them when needed. Such men are forever tormented by street cattle, which usually go in herds, and are forever picking quarrels with those in enclosures adjoining the highway—throwing down fences and teaching other cattle to do so, and fighting when the fences are down. Many a quiet and orderly stock has been made unruly, and of course of depreciated value, by evil associations with animals running at large.

But there are other wrongs to which individuals are subject, through this pernicious practice. Suppose for instance, (and it is a supposition which will hold good in a great majority of cases) that the farm of A. is situated so that a great proportion of his farm teaming is across the public way. In spring he wishes to haul his manure to fields opposite to his barns, one of two things must be done: the bars must be put up, or the gates opened and shut on each side of the way, every time he passes, or his fields must be trodden up by herds of marauders, wandering about like the prince of darkness "seeking whom they may devour." In summer, the season of busy cares, when earth is pouring her treasures into the storehouse and granary, the same scene of opening and shutting must be passed through again, only twice at each gate for every load of hay or grain that is moved to the barn. Now, is not this a pretty item of labor in the hurry of haying and harvest?—And does the public, for whose benefit the farmer's fields are cut in twain, demand it? No; they only ask "*the right of travel and repair*," all these ceremonies of labor and toil must be gone through with to gratify the lawless desire of a grasping individual. Let animals be expelled from the highway, and bars may be out and gates open for the prosecution of the business of the farm from morning till night, or from spring to autumn, with nothing to molest or make afraid for the safety to crops. And now, brother farmers, we leave it for you to say whether such a state of things is desirable in the prosecution of your daily employments.—For ourselves, we have lived under the dispensation of cattle going at large, and now live under the brighter one of having them enclosed, and found the difference in favor of the latter too great for our expression. *Try it*, and you will say likewise, and your neighbors who may not at the first like it so well, will, after a fair trial, give a response to your sentiments.

But to the text—How it can be done? In the first place get a draft of the law of Massachusetts in this matter. It is as perfect as a law can be, and so plain that a fool cannot mistake its meaning, (though perverse and obstinate men may sometimes give it a perverse translation) and send petitions, many or few as circumstances may permit, to your legislature, and ask that a statute in its very letter may be entered upon your own book. If they refuse to do this, give them leave *to stay at home as unfaithful servants of the people, in all future time, as the reward of their short comings in protecting the people's rights*, and try again, and continue *to try* until the thing is accomplished. It will soon be done, and in the end will compensate in more than a hundred fold for all the labor its accomplishment will cost. Get such a law passed, we say, farmers, for ye are the people and can do it, in every state in the union, and you will realize in one particular, the pleasure of sitting under your "own vine and fig-tree," and will entail a protective statute on posterity, of more value to them than all the protective tariffs that a nation of Congresses ever would impose. W. BACON. *Elmwood, July* 1848.

KILLING ANIMALS IN THE NIGHT.—DUMAS states that animals killed towards the middle of the night furnish meats which are more readily preserved, than do those which are slaughtered in the day-time. This seems to indicate that the meat most suitable for preservation, is that which is taken from the animal when its respiration is least developed, and its temperature is at the lowest point. The flesh of animals when killed after a long run is unfit for keeping, and this is considered a proof that a quickened respiration and a highly developed temperature are conditions unfavorable to its preservation.

NEW PATENT CLEVIS.

MESSRS. EDITORS—Permit me, through the medium of the Cultivator, to introduce to notice an improved clevis with a few remarks on the draft of that most important implement, the PLOW.

Although the plow is one of the most common implements, it is not using too strong language to say it is at the same time the most complicated of all farming tools and machines, and whoever is capable of making a plow-pattern of good form and proportion, as to its strength, weight, draft, and which is effectual in its operation, is no ordinary mechanic.

Again, after the pattern-maker has done his part properly, nearly as much depends upon the skill of the person who stocks or woods the implement; as the farmer too well knows by experience, who may have had the wood-work of a plow repaired or renewed, and afterwards found it another plow in operation, sometimes, it may be, for the better, and at others, perhaps, useless.

But supposing the patterns and the wood-work to have been made properly for a certain width and depth of furrow slice for two horses; the same plow, with a larger or less furrow slice, or perhaps with three horses, would become comparatively, if not entirely useless, without an adjustable clevis or fixture at the end of the beam.

The clevis in general use for a team of two horses or one yoke of oxen, is capable of being varied only to the extent of the size or square of the end of the beam, while for three horses abreast, or when it is desired to work the team on the solid ground, and not in the furrow, the Scotch clevis (so called) is in extensive use, and is one of the best modes of regulating the working of the plow. It is, however, an expensive part of the plow, if properly made, and is not unusually heavy and cumbrous, and the difference of its variaiton is too great for a perfect adjustment of the plow.

Fig 1

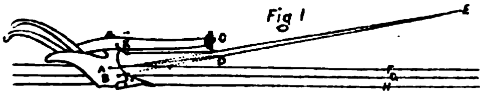


Fig 3.

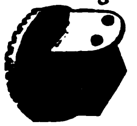


Fig 2.

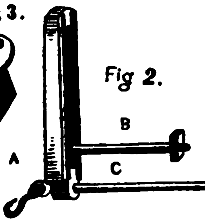
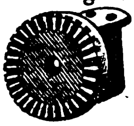


Fig 4.



To more fully explain the engravings, I would first say, that all plows when in operation have a right line of draft, (often miss-called a "centre of draft,") and which may be described as follows. It is an imaginary line from the centre of resistance upon the mouldboard to the point of motive power, as the hames of the horses, staple-ring in the yoke, with oxen. This point upon the mould-board would be a little below the surface of the ground being plowed, and towards the forward part of the same, as for instance in fig. 1—let the line H. represent the bottom of the furrow, and the line F. the surface of the ground being plowed; then this centre of resistance would fall near the point on the mould-board, at A, and the point of motive power being at E., the line of draft would be from A. to E.; and in order to preserve the line of draft, the power should be applied to the plow as represented at C. But if the depth of furrow be changed, and the line H. remain the bottom of the furrow, and the line G. the surface of the ground, the centre of resistance would necessarily be lower in the mould-board, or as represented at B; the line of draft, consequently, would be changed and pass below the former point at C., so that it becomes necessary to change the clevis and attach the power at the point D, to insure the proper working of the plow. The above cut shows only the changes for regulating the depth, but the same rule holds true with regard to the width of furrow, or the position of the team, length of the traces or chain, &c., &c.

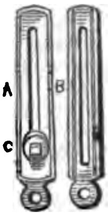


Fig. 5.

The improved and new clevis is shown in Fig. 1, attached to the plow, and is formed by a circular cast-iron face-plate, with a course of projections like small cogs near its circumference as shown in Fig. 4—and a bolt-hole through its centre, and the back so formed with flanges as to form a square box or cap just the size of the end of the plow-beam, as shown detached in Figs. 3 and 4. This "dial-cap" is confined on the end of the beam, across this, is confined a moveable iron plate or guide, 10 or 12 inches long, with a long slot or aperture through the middle, and an eye or hole through one end of it; and on one side it has two small ribs running its whole length, and which when placed against the dial plate, fit into the cogs of the dial. This plate or guide is shown at Fig. 5, A being the front, and B the back of it.

This plate is confined to the dial by means of a bolt passing through the slot and through the centre hole in the dial, and extending into the end of the beam several inches, and into an iron nut which is fitted in from the under side of the beam, the bolt and nut is shown at B, fig. 2. The head of this bolt is square, and is turned by a common wrench. It is shown at C, in fig. 5.

The plow is drawn by means of a rod which is attached by one end to the beam near the coulter, or at K in fig. 1. This rod extends along under, or by the side of the beam, and through the hole in one end of the iron guide at the fore end of the beam—this end or rod terminates in a hook or link, as at A, fig. 2.

Therefore, all that is necessary to change the clevis and to preserve the line of draft under different circumstances, is to loosen the bolt at the end of the beam, and move the guide in any direction, and any distance by means of the slot, and tighten the bolt again with the support of the cogs, which makes the whole firm. Its principal advantages are, the small expense of it—as it is put on any plow complete, in place of a common clevis, at fifty cents—its lightness and strength, being never broken by the hardest usage. By the use of the draft-rod, the beam is greatly relieved and is seldom broken, and the variations can be made to any degree of nicety.

This clevis was patented by J. M. C. Armsby, of Massachusetts, in December, 1845, since which time several thousands have been sold and used on plows, and with entire satisfaction. Several patent clevises have been offered about the country, and recommended very highly; but from my own observation and ten years' experience in manufacturing and selling plows, I have not seen one so simple, cheap and perfect as that above described. HORACE L. EMERY

Albany, July, 1848.

GUENON'S TREATISE ON MILCH COWS.

The subject of this work is noticed in the Report of the Commissioner of Patents. It is observed, (p. 206) that according to a recent report by M. Yvart, to the central convention of Agriculture in Paris, the following appears to be the present state of this alleged discovery:

"It is admitted that there is some general correspondence, as respects cows, but the signs are deficient as to the male animals. The classification which M. Guenon has proposed, is altogether too minute and extensive to be of practical value, as the pretended distinctions of the subdivisions are not verified on examination."

Since the publication of this work in this country, I have devoted some attention to the theory it embraces, and have come to the following conclusions, viz: 1. That a majority of cows have marks similar to what Guenon describes as "escutcheons," and that where these are found, there is a correspondence with his rules, so far as regards the leading qualities; that is, where the animals are kept under the same circumstances, those which have the marks of the first or highest class and order, gives the most milk, and those having the marks of the lowest, give the least. 2. That there are many cows that have none of Guenon's "escutcheons," and among them are frequently found those of the highest milking qualities; to such the rules can have no reference whatever. 3. That the theory claims *too much*, even in respect to those cows to which it is at all applicable; because it pretends to state the *precise* quantity of milk given by cows of each of the classes and orders, and the *exact* time they will continue in milk after having calved; whereas it is evident that the milking property depends in so great a degree on the quantity and quality of the food eaten by the animals, the care bestowed, and all the circumstances in which they are placed, that any external marks can be only indications of general qualities.

But there are other objections to the system of Guenon. It proposes to select and breed animals with exclusive regard to a single quality—that of giving a large quantity of milk—it notices only the points supposed to denote this, and overlooks others which are essential to constitute the most profitable animal, even for the dairy. A coarse, large-boned, weak-constitutioned cow, may, when full fed, without regard to expense, give a large quantity of milk; but this by no means proves that she is a good animal. Such cows are known to be enormous consumers, and to require extra attention in feeding and sheltering; and though they may, when supplied with good food to an unlimited degree, show the largest yield at the pail, yet when placed in a poor or rugged pasture, with ordinary exposure, a cow of proper proportions and muscular vigor, would yield a more valuable product. Besides, as *breeders*, animals of coarse bone and poor constitution are not to be encouraged—their tendency to various diseases, and general defects, is often manifested in an increased degree in their progeny, till the stock from their loose frames, unwieldy carcases and unhealthy habits, is rendered actually worthless.

The selection of sheep, for breeders, that possess the greatest possible fineness of wool, to the sacrifice of hardiness of constitution and other properties essential to *profit*, has been found injudicious; and so it will prove in selecting cows *solely* for the quantity of milk they may give. The properties of the dairy should certainly be secured, but the proper form and constitution should be added also.

Again, it is an error to suppose that the quantity of milk yielded by a cow is a criterion of her value for ordinary dairy purposes—it does not show what would be the amount or value of the butter or cheese she may yield; so that if Guenon's system were correct, the object sought for, (the most *valuable* cow,) could not be obtained, except in cases where the *quality* of milk was not regarded. It is admitted that in the preliminaries to his tables of "escutcheons," it is said that the quality of milk can be foretold, yet no signs are laid down for this purpose, and the tables and rules only refer to the quantity—to the number of "*litres*" of milk the cows of the different classes and orders will give.

It is a system, therefore, which at the best could only be adapted to those who *sell* milk with whom quantity is, of course, the only object.

A reference to those cows which have been the most remarkable for the production of butter, will support the remark that the quantity of milk is not a proper criterion of value in such cases.

The most extraordinary production of butter of which we have any account, is that by the "Cramp cow," so called, owned in Sussex, England. For five years this cow yielded an average of 545 pounds of butter per year, and in one year, (1807,) she produced 675 pounds. The greatest quantity of milk given by this cow in any one day, was twenty quarts, and the greatest quantity of butter produced in a week was eighteen pounds.

The celebrated "Oaks cow," which was owned in Massachusetts, yielded for three years an average of 394 pounds of butter per year, and in one year, (1816) she produced 484¼ pounds. The greatest quantity of milk given by her in one day, was eighteen quarts, (beer measure.) While this cow was owned by Hon. Mr. Quincy, he states that on several trials, five quarts of her milk afforded a pound of butter.

Now, cows are sometimes heard of which give from thirty to forty quarts of milk per day; but can any such product of butter as is above given, be shown from them? On the other hand, is it not a fact that the milk of such cows is generally deficient in the butyraceous quality, and that the butter it yields is often of loose consistence and inferior flavor? A Dairyman.

A Profitable Speech.—A correspondent of the *Farmer's Cabinet*, says that after hearing an excellent speech from Dr. Darlington, before the Philadelphia Agricultural Society, on the proper use and care of implements, he was induced to make such useful repairs, provide a tool-house, and keep his implements in so much better order than before, that "he calculates his savings in wear and tear of tools, since the delivery of that speech, has not been less than $50 per annum; while the time gained by having everything in its place, was worth as much more"—adding $100 a year to his income.

New use of India Rubber.—A stratum of India rubber placed under the rails of railroads, is found to prevent in a great measure, the jar experienced when passing in cars over ordinary railroads. Would not a layer of the rubber between the hoof and shoe of a horse, be useful in preventing concussions which so much injure the animal when driven on pavements or hard roads?

A DISCOURSE ON AGRICULTURE.

We are indebted to Dr. Wm. Darlington, for a copy of an address delivered by him at a meeting of the citizens of Oxford and vicinity, Chester county, Penn., assembled for the purpose of forming an agricultural society.

The principal objects of the speaker were to demonstrate the usefulness of *associated* labor and intelligence, and to show the necessity of a knowledge of the principles which are involved in the practice of agriculture. His observations on these points are given with much force, and we think the following extracts will be read with interest and advantage:

"Man, is by nature, a gregarious animal,—and evidently intended for the performance of mutual good offices. Even in his rudest condition, he soon learns the importance of co-operation with his fellows in producing desired results: and as he advances in civilization and refinement, he discovers that the benefits to be derived from combined skill and energy are in a direct ratio with his progress in improvement. The developments of Science not only excite a salutary emulation among individuals,—but they also show how much more may be accomplished by a concentration of effort—by a skillful union, and concert, of individual talent and energy. Hence the resort to *Societies*, for the promotion of desirable objects. By a judicious combination of their several means, and capacities, in the mode best suited to render them all available, men have accomplished purposes which, *individually*, they could never hope to perform.

"Associated efforts having been found thus valuable, in all great works of Art, requiring skill and force—and in the prosecution of researches after Scientific Truth,—the inquiry is naturally suggested, why the important business of *Agriculture* may not, also, be benefitted by a resort to similar expedients. Is there no sort of knowledge involved in successful Agriculture, which may be reciprocated, with good effect, among the members of a Society—or promoted by a generous co-operation? Is there no scientific or practical skill requisite, in the amelioration of soils—the culture of plants—or the management of stock—which may be advantageously imparted by the experienced, for the benefit of young beginners? If there are truths in Nature, which farmers are interested to know—or processes in Art, wherein dexterity and economy are desirable,—can any good reason be assigned why the cultivators of the soil should not associate, to secure to themselves those advantages? It may, perhaps, be alleged,—for the unreflecting do often make such random allegations,—that Agriculture is essentially a *practical* Profession; and therefore has little occasion for artistical skill, or scientific accomplishments. I am prepared to admit all that can be fairly urged in behalf of sound experience, and plain practical common sense—not only in Agriculture, but—in all human pursuits. I grant that the cultivation of the soil is eminently a matter-of-fact business. It is true, moreover, that the veriest clod-poll in the land may pursue the beaten track of his annual labors with tolerable success,—and may gather in his crops with little more knowledge, of the objects around him, than is possessed by the cattle he drives: But I can never believe that *true knowledge* is injurious to the operatives, or to the interests, of any profession, or business;—nor can I be persuaded that boorish ignorance is the proper condition and character of a thorough-bred Agriculturist. Most assuredly, it is not the appropriate character of an American Farmer. While I not only agree, but would insist, that a sound *practical* knowledge of their profession should be the primary object of the cultivators of the soil,—I must, at the same time, contend for the feasibility and necessity—in the existing state of society, and under Institutions like ours—of an adequate acquaintance with the laws of nature, and with the properties and true character of the objects immediately concerned in Agriculture. That acquaintance, of course, should be based on correct scientific principles,—so as to be always available when applied to the useful purposes of life. I hold it, indeed, to be essential to the safety and duration of this Republic, that our *Yeomanry* should keep pace with the march of general intelligence. As they value their just rights, and would cherish the attributes of Freemen, they must take care that their attainments never lag behind the age in which they live,—nor they, themselves, become unfit to mingle, and to struggle, with the master spirits who, for good or for evil, are ever seeking to direct the course and control the progress of communities.—*Agriculturists* being a majority of this nation, it is perfectly obvious that they must be either the intelligent regulators of its glorious career,—or the blind instruments of its destiny in the hands of artful Demagogues; and consequently they will be held responsible for the fate of the Republic, by their remotest posterity.—Ought they not, then, to employ every means, and exert every nerve, to qualify themselves for the high duties thus devolved upon them?

"There is nothing unreasonable, nor extraordinary, in the acquirements thus indicated as appropriate and indispensable to the *American Farmer*. In a nation fitted for Freedom—or which hopes to continue free—such attainments are enjoined upon all classes and descriptions of the People. Where men stand unfettered on the platform of equal rights, it is justly expected of every one, that he shall qualify himself to meet all the responsibilities belonging to his station in society: and this is eminently true of the particular business to which he is devoted. The remark is as correct as it is pointed and forcible, that "where knowledge is a duty, ignorance is a crime." No man should be held excusable for neglecting the opportunity to inform himself of that which it is his interest and his duty to know. *Professional men*, so termed, are bound to be familiar with the entire history, and with every department, of their several callings. The *Jurist* must make himself acquainted with the intellectual processes whence our present *rule of action* has been deduced,—in order that he may correctly apply that rule to all cases of difficulty between man and man. The *Physician* is required to know the structure of the human body, and to understand the laws of the animal economy,—so that he may avail himself of that knowledge, when called upon to relieve the various "ills that flesh is hair to:" And the *Divine*, also—whose sacred office it is to minister to our spiritual wants,—to expound the objects of our probationary existence here, and "vindicate the ways of God to man,"—even he is expected to furnish "a reason for the faith that is in him." *Artists* and operatives of every description, who would adorn their several pursuits, find it necessary to understand the *theory*, or principles, involved in their manipulations,—as well as to become expert in the practical details.—Such being the unquestionable fact, in reference to all other vocations,—it may well be demanded, why the business of *Agriculture*—itself a comprehensive system of Natural Science, involving more or less an acquaintance with all physical laws, and all terrestrial phenomena—and being moreover the great substratum and support of every other human pursuit,—*why should Agriculture, alone*, of all earthly employments, be regarded as calling for no scientific attainments—no intelligent observation of the varied natural objects, the interesting facts, and curious processes, around us: in other words—no rational exercise of the intellectual faculties with which a beneficent Creator has endowed us? It was, indeed, wisely provided, that an art to which the whole human family is indebted for sustenance, should be so simple in its essential features, that even stupidity can make a living, and mere muscular energy be profitably employed, in its prosecution: But, in the nature of things, it cannot be, that a business involving so much of Natural History—and controlled by so many of the laws indelibly impressed upon matter,—it can never be predicated of such a pursuit, that a knowledge of its true principles is superfluous—nor that its best interest may not be promoted by a cultivated intellect. I shall therefore assume, as an established position, that a knowledge of the Profession, *in all its relations*, is requisite to ensure the perfection of Agriculture, and to elevate it to its proper rank: and moreover, that in a country where Laws rule, and Yeomanry have a potential voice in their enactment, it is indispensable to the perpetuity of their Institutions, that an Agricultural people should be an educated and an intelligent people.

"I would, therefore, exhort our young Farmers to acquire so much Natural Science as will enable them certainly to know, and to discriminate between, the more important objects of their daily care and attention,—and by means which they may also treat of those objects intelligently, and correctly, in their intercourse with others. They should be so far acquainted with *Geology*, and *Minerals*—and understand so much of *Chemistry* and its laws—as to have a general idea of the structure and stratification of the Earth's crust, and a just conception of the reciprocal influences exerted by the constituent portions of the soil, and the atmosphere. This information may now be readily obtained, from elementary works within the reach of every one who has the taste or the inclination to possess it: But, that all might have a fair and equal opportunity to profit by such knowledge, according to their several capacities, it should be made an indispensable branch of the education of Youth, and faithfully imparted, by competent teachers, to every child in the Republic. Until such instruction shall be provided, it may be confidently maintained, that no better substitute can be devised, than is afforded by the intercourse of intelligent, public spirited men, in well-conducted *Associations*.

"Similar remarks may be applied to the expediency of a reasonable acquaintance with the *Vegetable*, and the *Animal* kingdoms. What sort of an Agriculturist is he—in this age, and country—who is so ignorant of the interesting *Plants*, on his own farm, as to be continually overlooking the most pernicious weeds, when they invade his premises—or mistaking, for them, those of a comparatively harmless character;—and who knows so little, even of those he annually cultivates, as to be unable to designate them by a name that is certainly comprehended, beyond the limits of his native parish? Is the young American Farmer, who can rest contented with such imperfect intelligence in his immediate Profession,—is *he* calculated—in this progressive era—to advance the interests, or maintain the appropriate rank, of that first, and noblest, and most indispensable of secular employments? Surely, it ought not to be thus with *Agriculture*—when all the kindred Sciences are going ahead with rail-road velocity. The several departments of knowledge are auxiliary to each other. They reciprocate lights, by which their obscurest truths are illustrated. They should, therefore, all proceed with equal step. It is not necessary—neither would it be expedient—for the practical Farmer to spend his time in studying the unimportant species of the vegetable creation,—nor in tracing the distinctive features of all the various tribes—"from the cedar tree that is in Lebanon, even unto the hyssop that springeth out of the wall": But, as his business is especially with the more interesting kinds—with the *culture of useful plants*, and the *extirpation of pernicious weeds*, I hold it to be his duty to acquire a knowledge of *these*; and such a knowledge, too, as shall be adequate, both to the proper management of them, and to the delineation, when called for, of their true botanical character. This would be a limited task, and an easy attainment,—quite within the reach of every ordinary capacity.—Some three or four hundred species, comprise all the more important plants usually observable on our farms—whether in the forest, the fields, or the kitchen-garden; and it must be an obtuse intellect, indeed, which cannot learn to know and distinguish that number of vegetable forms. The juvenile pupils of some of our Female Seminaries are, every year, demonstrating the facility with which the task may be performed.

"I shall not detain you with observations concerning the importance of *Zoological* information; for *that* is a kind of knowledge so intimately connected with our prosperity and comfort, that we cannot well avoid the acquisition of a reasonable share,—at least, with reference to the larger animals which are domesticated, or indispensable on the farm. Our daily habits and associations force the attainment on us all. The rudest bumpkin that ever trampled on flowers—or worked among weeds, without being able to distinguish one from another,—is nevertheless compelled to become acquainted, in some degree, with both the valuable and the mischievous animals,—fowls, as well as quadrupeds: indeed, it is wonderful to observe how well, and thoroughly, such untutored persons do often learn the distinguishing traits—the dispositions, and the characteristic peculiarities—of animated nature. Still, there is a *scientific aspect*, of which every department of Natural History is susceptible,—under which it assumes a methodical perspicuity—an illustrative arrangement—which is exceedingly gratifying, as well as instructive,—and merits the attention of all inquiring minds. There is, moreover, a *branch* of Zoology,—embracing myriads of tiny creatures—and many of them of the most destructive character to the hopes of the Farmer, which is yet imperfectly understood, and demands the closest scrutiny of every one concerned in the products of the vegetable kingdom I refer, of course, to the multitudinous *Insect* tribes;—some of which are occasionally so injurious as to spread dismay throughout whole nations,—and, at the same time, of habits so obscure as to require the most patient observation, and the utmost sagacity, to ascertain their true history.—Even these minute researches—too generally neglected or despised—are demanded by the best interests of Agriculture;—and to be successful, they must be conducted on scientific principles. A little mental discipline, however—backed by perseverance—will soon enable the curious observer of Nature to make valuable contributions to the common stock of information. I would therefore have every *American Farmer*, who can appreciate the responsibilities of his position, to cultivate his intellect with the same care and assiduity that he does his acres. Let him habituate himself to note the facts—to observe the phenomena—and to investigate the theory of the processes—which are continually taking place around him: and let no one delude himself into the belief—nor seek to excuse his deficiencies by the stale and hackneyed plea—that he has not *time* for such pursuits. Why, those very pursuits are part and parcel—a very important part, too—of his own appropriate business. It is precisely for such business that his *time* is allotted to him. At this day, and in this land, it will not do, to urge the want, either of time or opportunity, for the due performance of our parts in life. Most people contrive to find time for what they really wish to do ; and if driven to the necessity, are apt to *take* it, at any rate, for those pursuits which they are resolved upon. But the fact is, we all idle away, or waste in frivolous amusements, more time than would be requisite to fit us for the performance of our several duties. We are very prone to mistake the real nature of our *wants*. It is not so much to the *want of time*, as to the *want of inclination*, and of a proper sense of our responsibilities, that we should attribute our failure to possess the accomplishments which justly pertain to our Profession and station in society. It is *this want*—this neglect of the more elevated attainments, and this lack of a just perception of the beautiful—which has, hitherto, been most striking and conspicuous among the Agriculturists of our country. While our Farmers have generally attended—faithfully and successfully—to what is familiarly and truly denominated "the main chance,"—it must be confessed that too many among them have exhibited a lamentable want of tact and skill in planning and improving,—or in availing themselves of natural advantages, in the arrangement of their rural establishments.

"Next in importance to successful culture, and a correct knowledge of the objects and principles involved in the process, is the attainment known as good *Taste*,—or that refined sense of the beauties of Nature, which knows how to appropriate her charms, in the embellishment of farm-houses, or cottages—and to invest them with that witchery and grace which should ever be associated with a country residence. No person, who has enjoyed the delights of a tasteful rustic dwelling—embosomed among venerable trees, and reposing amid the verdure of flower-spangled lawns,—can fail to be shocked at the contrast of a rude vulgar-looking tenement, awkwardly stuck in some open weed-grown space, without a shade tree, or an enclosure, to protect it from the rays of a burning sun, or the annoying approaches of the trampling cattle : and yet the difference may be entirely owing to the exercise of a cultivated taste in the one case, and a total destitution of it in the other. *Fruit trees*, and *Shade trees*, should be regarded as indispensable appendages of every human residence. If duly attended to, the former will amply gratify the palate,—while the latter will also minister to our enjoyment—directly, by the refreshing shelter afforded to ourselves—and indirectly, by attracting to their branches the lovely Serenaders of the feathered race. How delightful, in a tree-embowered cottage, to be roused from our slumbers by the gushing melodies, which, in such abodes, ever greet the dawn of a summer morning! By providing a shady retreat for the little warblers—and protecting them from the weapons of reckless sportsmen—we not only secure their punctual attendance, with the grateful tribute of their vocal strains on each returning Spring,—but we are rewarded, tenfold, for all such benevolent offices, by the industry with which the welcome visitors labor to rid us of annoying and destructive Insects. It should, therefore, be the business and the pleasure of the intelligent Farmer—wherever located—thus to improve and adorn his premises."

DOVE-COTE AND RABBITRY.

In reference to the request of a Mississippi correspondent, to furnish a plan of a pigeon-house, we give the engraving on the next page, which is designed for both pigeons and rabbits.*

Pigeons are not at all particular in regard to their shelter or breeding-places. Any box, nailed against the wall of a barn or other building, with holes for ingress and egress, will satisfy them. Even shelves, placed around the inside of some out-house, will answer every necessary purpose. But when it is designed to render these birds as much as possible an ornament to the homestead, more sightly and tasteful habitations are provided.

If several varieties of poultry are to be kept, a separate house will be found most suitable; it should, of course, be divided into the requisite apartments for the accommodation of the different kinds, and the dove-cote may be placed on the top—surmounting the roof in the form of a cupola. This plan, if perfectly carried out, makes a complete *aviary*, which, if properly situated, adds greatly to the beauty of a country residence. There are, however, comparatively few people who live in the country, and may wish to keep pigeons, who can afford the expense of so costly an establishment.

A cheap and rather ornamental dove-cote, may be made of an empty cask raised on a pole. It may be a barrel or a hogshead, according to the number of birds to be accommodated. If a hogshead, it may be divided into three stories and partitioned off for separate nests. This makes a pretty and convenient house for a small number of pigeons. The chief objection to it is, it is difficult to clean. In this respect the following plan, which we have seen adopted, is preferable:

A small square house is erected on four poles. Rows or tiers of boxes for nests, are arranged on three sides of the house. A space is left in the centre, large enough for a person to enter and clean the boxes, which should be accessible for this purpose. The space should be closed by a door; the building to be reached by a ladder.

Boxes for nests should be about eighteen inches square on the bottom, and about a foot in height. For holding the nests, cheap wicker baskets, or small earthen pans may be used. The pans may be three inches deep, eight inches over at the top, sloping to the bottom. Some fine soft hay, put in the baskets or pans, will save the pigeons the trouble of carrying in the materials for nests. The boxes should be frequently cleaned, as the accumulation of filth is unfavorable to the health of the birds.

In the plan illustrated by our cut, the pigeon-house is, as before observed, placed over a rabbit-warren,—the combination forming an ornamental structure,—which, if placed on an island, handsomely planted with trees, in the centre of a sheet of water, adds a highly picturesque feature to the scenery.

The area, surrounded by palings, is about twelve feet in diameter. The inside is excavated to the depth of two or three feet, forming a pit in which the rabbits are kept. The top is thatched, as giving a more rustic air than any other kind of roof. The posts and chain are designed as a protection of the enclosure

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*The cut is taken from an English work, entitled "Farming for Ladies."

Dove-Cote and Rabbitry.

against cattle and horses. It does not appear, however, that any excavation is necessary—the rabbits will probably do quite as well if kept on the surface.

But rabbits are more commonly kept in huts or "hutches." In regard to the mode of making these, and the general management of the animals, we copy the following from the "Farming for Ladies:"

"The breeding hutch, as being the habitation of the doe, is always the larger and contains a double apartment—one for the nest, and the other for the feeding room of the young, when old enough to come into it. The best size is about four feet long by two and a-half feet wide, and eighteen inches to two feet high; but they are often made smaller, and those not meant for breeding, are seldom more than two-thirds that size. They are latticed with wire in the front of each, as, if made of laths, the rabbits would gnaw them; but the division parted off for the reception of the breeding nest, is closed both at the front and sides, leaving only a small door in the interior for the entrance of the doe: indeed an inner division with a sliding door is used for confining the rabbits while the outer part is cleaned. There should also be a moveable feeding trough, which should be regularly taken away after every meal; for rabbits, like horses, if allowed to blow upon their food will not afterwards eat it, unless pressed by serious hunger. The troughs should be made of tin or iron, to allow of their being easily cleaned; and should have separate compartments, of not more than four inches long, both for different sorts of food, as well as to prevent the rabbits from getting their feet into the trough and throwing out their corn. Some persons even add a small rack at one end of the hutch, for the purpose of containing the hay on which they feed; but the small quantity usually given, is more commonly left on the floor. The trough should be either inserted as a drawer, or if placed outside, the hutch should be covered by a hinged flap to shut and open, in either the front or one end. The floor is commonly pierced with holes to allow the escape of the urine; but, as the greatest attention is necessary to be observed in the cleansing, it [illegible] a good plan to have a false bottom, which may be drawn out like that of a bird cage, for the removal of the excrement, and ought to be every morning scraped and strewed with a little sand, or, in cold weather, covered slightly with refuse hay; for rabbits will never thrive unless kept dry and clean."

"Hutches of this description, well made and of good material, will not cost more than from eight to ten or twelve shillings, [two to three dollars,] according to their size. Any carpenter or joiner can make them with these directions, and we have lately seen one of the largest size, in every respect well fitted for breeding, the price of which was half a guinea—[about $2.50.]

"The hutches if numerous, may be placed over each other, and are sometimes ranged round an outhouse kept for that purpose; but is seldom necessary for small families, and the better way is to put them upon a stand in the open air against some sheltered wall, for a too confined atmosphere is not natural to them, and if kept in a close room they emit a faint and unpleasant odor. The hutch should, however, be covered at night, as cold will prevent them from breeding in the depth of winter."

In this country, rabbits are chiefly kept as objects of amusement, but in England they are reared for their flesh, and large numbers of them are sold in the markets. Their flesh, especially when young, is well tasted and wholesome; for invalids it is considered equally as proper as that of fowls. They are generally killed "from the teat," while they are from four to six weeks old. They weigh at that age, if well fed, from two to three pounds, "trussed for the table."

There are several varieties, some of which are highly prized by fanciers. Some are very large, reaching the weight of ten to twelve pounds, or more, dressed; and when castrated and well fed have been known to weigh fifteen pounds each. **Mowbray** speaks of "a very large variety, of the hare color, having much bone, length and depth of carcass, large and long ears, with large eyes, resembling those of the hare. They might" (he says,) "well be taken for hybrids or mules, but for the objection of their breeding. Their flesh is high colored, substantial, and more savory than that of the common rabbit; and they make a good dish cooked like the hare, which, at six or eight months old they nearly equal in size." We have seen a few of this variety—they are fine-looking animals. There is another very large variety, chiefly of a yellowish brown color, with lop ears of enormous length. It is said that the ears of one of this variety, which gained a prize from a fancy "Rabbit Club" in London, measured across the head, from the tip of one ear to the outer edge of the other 20¼ inches. These are sometimes called Spanish rabbits.

But a writer who appears to understand the subject, observes—"For common use we believe the large grey rabbit to be the best, though the black and white seem to be the favorites among amateur breeders; but any sort will do for the hutches, provided they be healthy, of good size, short-legged, and broad in the loin."

The proper food for rabbits is oats, peas, wheat, buck-wheat, Indian corn, with potatoes, turneps, and clover or lucerne, in summer, and nice, well-cured clover hay in winter. They are similar in constitution and habits of feeding to sheep, and like them are liable to injury, such as diseases of the liver from eating largely of succulent food. **Mowbray** directs that they be fed regularly three times a day, with such quantity as they will eat up clean.

Wire Worm.—C. W. **Johnson** details an experiment, where, on a 50 acre field sown with wheat, half an acre was preceded by a crop of white mustard. This half acre was wholly exempt from the wire worm—the rest of the field was much injured. Another field of 42 acres, so much infested with the wire worm, that nearly every crop for nineteen years was largely destroyed by this insect, was then wholly sown with white mustard. The following year not a wire worm could be found. He therefore concludes, that by destroying all weeds and roots, and by a careful and clean drill culture of the white mustard, the wire worm may be expelled.

The Steam Engine.—It is estimated that steam power effects in England a saving of as much labor as could be done by three hundred millions of men.

IMPROVEMENT OF SANDY AND GRAVELLY SOILS.

Mr. Adam Anthony, of North Providence, furnishes the officers of the Rhode Island Society for the Encouragement of Domestic Industry, an account of the mode in which he has very successfully improved his farm. The farm consists of 150 acres, but deducting 50 acres of wood, 18 in a "natural pasture," and 10 in wet meadow, there is but 72 acres suitable for tillage or hoed crops. The principal portion of these 72 acres, is "very sandy, with a subsoil of sand and gravel," and was originally very poor. Mr. A. took possession of the farm in 1826. "The crops of that year, were 5 tons of English hay, 3 of bog hay, 2 of oats, 200 bushels potatoes, 200 of turneps, some fruit and a supply of garden vegetables for home consumption—worth, including pasture feed $385. The produce of the farm last year, (1847,) was by estimation, 200 tons of green fodder for soiling, 100 of hay, 25 of millet, 17 of dry corn fodder, 640 bushels of potatoes, 750 bushels Indian corn, 50 bushels apples, with other fruit and garden vegetables—the value of which, inclusive of pasture feed, is $3.575. Nearly tenfold increase in the products of the farm."

Previous to 1826, the sandy portion of the farm had been put to Indian corn and rye, at intervals of about six years, and had yielded about eight bushels of corn, and about five bushels of rye per acre. The rye was sown on the corn-hills—no grass seed being ever sown. It was of so little value for grazing, that 75 acres, half in wood and half in pasture, rented in 1826 for $15. This same pasture produced last year, more than half the crops above named.

The basis of Mr. Anthony's improvement, has been the application of *leached ashes*. The products obtained by the use of ashes, afforded the means of keeping a larger stock and increasing the quantity of manure; the manure permitted the introduction of other crops, which being consumed on the farm, laid the foundation for larger yields and more extended cultivation. His first crops were clover and millet, and his mode of preparing the land was to plow "at first from four to six inches deep, turning the furrow flat when there has been tenacity enough for the purpose, followed by the roller, and if the field did not then present a surface sufficiently smooth for the reception of ashes and seed, the harrow, or bush, or both, as circumstances required, were applied. The ashes placed upon the field, in rows six paces apart—the heaps of uniform size, distance six paces in the row, and in the aggregate containing 200 bushels the acre, (the usual quantity first used on these poor soils) have then been evenly spread, and the field marked by drawing a chain into lands five paces wide in two directions, the last at right angles with the first. This done, the millet and clover seeds, previously mixed together and divided into two equal parts, were sown; one half in one direction of the field, and the remainder crosswise, or in the other. Two harrowings, the last across the first, succeeded by the roller, usually completing the operation."

The millet and the clover are both cut for hay; the first crops being about a ton and a half of hay, each, per acre. The third year after being sown, the land is again turned over, the plow running rather deeper than before, and the former course is repeated, with a somewhat less quantity of ashes than before. After a third repetition of this process, Indian corn and potatoes are brought in; these crops always receiving a dressing of manure—from six to nine cords per acre. For Indian corn, the stable or yard manure is always plowed in, the plow running from six to seven inches deep, followed by a roller, to prevent the disturbance of the sod in the after culture. [It should be remembered that this is a very loose soil, and needs compression.]

Mr. A. prefers sowing millet early in June, but the time may vary according to circumstances, from the twentieth of May to the tenth of July. If sown earlier, the weeds obtain the ascendancy; if later, the crop is liable to injury by frost. The quantity of seed is about forty quarts per acre. When grown of suitable fineness and well cured, Mr. A. considers it excellent fodder—better for soiling than most grasses, but inferior for this purpose to rye. Sandy soils produce it in greater perfection than any others; on heavy loams it is apt to rust. Mr. A. remarks that when clover seed is sown with millet, many of the young clover plants perish, and he recommends an extra quantity of seed on this account. He advises to omit sowing the grass seed till after the crop, whether of millet or any other kind of grain, is off; and he prefers stocking down in the last of August or beginning of September, to any other time. We will add, that we should prefer sowing clover at this time, to sowing it with millet or any spring crop, on such a soil as is here described.

Indian corn and rye are used for soiling. The corn "is drilled in rows 2½ feet apart, at different periods, for this purpose, and thus affording a successive supply. The seed used, from 2 to 2½ bushels the acre, covered with the hoe and dressed with the cultivator. The large sweet variety is esteemed the best on account of its superior richness, and the avidity with which it is eaten. It is, however, less productive than the flat or southern."

When rye is sown, "the land is stocked at the same time with clover for soiling, about the commencement of autumn, either on sward, clover lay or old ground, dressed with stable manure or ashes. The rye is commenced upon early in May, and the clover succeeds that of other fields when their produce has become too old to be relished. This is followed by millet. Next comes corn, the earliest drilled for the purpose. Afterwards suckers, and then again corn. This is all fed at the barn."

Management of Stock on the Soiling System.—Mr. Anthony gives his mode of managing stock as follows:

"The stock, averaging about 40 head, stand upon a platform, raised six inches above a tight floor which projects beyond the sill a few inches over the side of a planked trench outside of the barn. Here the cows (usually 36 in number) are fed three times a day. They go also to the pasture for a slight picking, for water and exercise, morning and evening. But they are always stabled at night, and a sufficient supply of peat or swamp mud, is placed just below the platform for the reception of the urine and manure. After lying 24 hours, the whole mass is hauled over and shoved through an aperture between the floor and the boarding of the barn into the trench referred to. In this way, 300 cords of excellent manure are annually made by the stock. In the planting season it is carried to the field and plowed in, undergoing little or no fermentation until it is turned under or incorporated with the soil. At other times it is placed in large heaps, when it is to be used the ensuing season.

"For seven months in the year, the cows go out only once in the day, having an hour or more in fine weather for air, exercise and water. All of these purposes being regarded as very essential to their health and comfort. They are furnished with some slop in summer, but are much more liberally supplied at other seasons of the year, especially in winter. Shorts, meal of Indian corn, and oil meal constitute the slop referred to. The quantity fed to each cow is various, and when a large quantity of milk is desirable and practicable, the feed should be such as to neither increase nor diminish the flesh of the animal.

"Formerly it was my practice to change nearly all my stock annually. More recently about one half, (quite as large a proportion of the whole raised as is worth keeping) are allowed to bring calves. The remainder are milked until they are fit for the shambles, when they are sold and their places supplied by others.

"Ordinary keeping is not calculated, in my opinion, to develope the milking properties of the best cows. Those that I have purchased, have rarely given more than two-thirds the quantity of milk the first, as in subsequent seasons, the feed in both cases being the same. They should be in good condition at the time of calving, or generally with liberal feeding afterwards, their tendency will be to flesh rather than to milk."

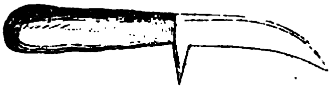
HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Experiments in Grafting.

Contact of bark not essential.—It is well, but not absolutely necessary that the *bark* of the graft and stock should touch to insure success. A shoot that has been cut in season, will, if kept moist, throw out a woody substance at its lower end—this will fill the space between the graft and the stock. I have made the wedge of the graft so thin on the outside, that when placed in the stock, the bark of each did not approach nearer than the twelfth of an inch in any place—they were waxed and all grew, and were only a few days later in starting.

Grafting Wax.—The following proportions suit me best:—3 lbs. rosin, 1 lb. beeswax, 10 ozs. tallow,—melted together and well stirred while cooling; particularly the latter part—on this depends the light color which is essential to prevent heating by the sun's rays. When used, it may be softened in warm water, if otherwise too cold, the hands to be rubbed with lard to prevent sticking. In this way, it may be applied in the best manner and with great facility.



Grafting Knife.—The tool figured in the Feb. No. will not be likely to be used by such as set 4 or 500 in a day. If it answers as well (which I doubt) there is much picking up and laying down in using it. The knife here used (Fig. 6,) is merely a crooked one with a wedge for opening the stocks, made as part of the blade at right angles near the handle. A blow with a small mallet will split the stock, another under the point will withdraw it, the wedge is then driven to open the cleft, the graft put in and no time lost in changing tools.

In grafting apples and pears, the best success has attended those put in when the trees are in full bloom—of one lot of over 250 set at that period last spring, not one failed to grow. M. Quinby, *Coxsackie, March,* 1848.

☞ *Remarks.*—One who has never used the tool described in the second number of the Cultivator, cannot conceive of the ease and perfection of its work. Such is the facility with which it is used, that a hundred stocks may be headed down for grafting in the most perfect manner, in as many seconds; a perfectly smooth slit for the graft is made with equal facility, by a single motion of the hand; an iron wedge opens this slit; using the head of the tool as a small mallet; all with no more picking up and laying down, than the knife and mallet described by our correspondent, while the work is both more radid and more perfect. These remarks are founded on the experience of years, in the insertion of many thousands of grafts with this implement.

New Mode of Grafting.—In some of the high winds, early in June last, I had some pear grafts broken off, which had been inserted a year before, and were of strong growth. Wishing to preserve the kind, it occurred to me that it was possible to do so by cutting off the short branches from the main branch, and using them as scions. These scions were from an inch to three inches in length, and were cut out of the main branch in the same way as in budding, and were grafted the same as in T budding; being carefully tied with matting. The stocks in which they were engrafted, were cut off a little above the place of insertion.

The result of this experiment has been highly satisfactory, for not one of the scions failed; but all commenced growing in ten or twelve days, and grew from two to three feet in the course of the season.

I have tried various other methods of grafting and budding, but never with as good success as in the manner here described. P. D. S. *Hartford, Ct., February,* 1846.

Destruction of fruit buds by Frost.

M. Quinby of Coxsackie informs us, "For the last ten years, whenever the mercury has fallen more than eight degrees below zero during the winter, the fruit buds of our peaches have been invariably frozen to death; when it remained above that point we have always had fruit. Two years during that time, the coldest weather was exactly eight below zero; one year it killed all the fruit the other about half. Consequently that is about the last degree of cold the peach can endure. The fact can be ascertained that the fruit buds are killed any time in the winter after weather warm enough to take the frost out; the centre then turns black. On the 11th *January* the mercury was 21 deg. below zero. I expected to find peaches killed, but not cherries and plums, which appear to have shared the same fate. It has been suggested that cherries and plums would not have suffered, had it not been for the warm weather the first part of winter, starting the buds. How is it? Did the buds start, and were they killed by the subsequent cold; or is there a limit to their endurance of cold, as well as the peach?"

Our correspondent is referred to the remarks on p. 181 of the present volume of the Cultivator, showing that it is not low temperature alone which destroys fruit buds. Indeed the fact that the point at which they are killed is placed quite differently by different cultivators, proves this to be the case. When peach buds have been much swollen by warm weather in winter, we have known many of them destroyed at a temperature of only five degrees below zero, leaving however enough for a good crop. On the other hand, we are assured on good authority, that at Montreal crops of peaches have been obtained, after the thermometer had sunk as low as twenty-eight degrees below zero—not the slightest swelling of the buds having previously taken place, and the trees being merely protected from *sudden changes* by a thin mat.

Under *ordinary circumstances* however, in the peach districts of New-York and New England, it rarely happens that the crop escapes a frost of 12° or 15° below zero.

There is no doubt that the cherry and plum, like the peach, is rendered more liable to destruction by the previous swelling of the buds—we have known the entire cherry crop destroyed by cold only 12° below zero, when the previous winter weather had been quite warm

Vines on Forest Trees.

In travelling through the states of Massachusetts and Connecticut a few years since, I was drawn to observe the quantities of grapes growing wild on vines that were climbing over the tops of the forest trees;—most of those which I tasted were of good quality, and they grew in abundance without any care whatever.—I have often heard people from the above mentioned states, speak of the excellent grapes that they used to gather from vines on the forest trees. A few years since, a friend of mine took the trouble to collect a quantity of cuttings of the best varieties, which he planted in his garden. The vines when they grew were managed with much care, after the manner that Isabella and Catawba vines are, on open trellises.—The consequence was, very little fruit was produced, and that of a very poor quality; and as he thought he had done his best, he at leath came to the conclusion that it was the change of location that had made such a wonderful change in the fruit. It happened that a few tendrils from one of the vines came in contact with the projecting limb of a plumb tree, and in a short time the shoots reached the top of the tree, and the next year the owner was gratified to see good fruit, and of as good flavor as any that he had ever tasted of the kind in their native place. In several instances I have known Isabella vines to run rampant over the tops of large trees, and they have never failed to produce large crops of grapes every year, of better quality than any that I have ever eaten grown on trellised vines, and without any labor being expended. There is one vine now growing in this town, that produces more grapes than any other six that are managed in the ordinary way; and what I wish to suggest is this: why cannot Isabella and Catawba grapes be raised to any extent throughout our whole country, on the tops of the scattering trees in the fields, and along the borders of wood-lands, and woody ravines, without any labor being expended or required, except in planting the vines, and training them up a permanent post set for that purpose? There should be three shoots fastened to the sides of the post, with loops of leather, until the beginning of March in the second year, at which time the number should be reduced to one, which is to make the trunk of the vine. It should be protected while it is small with stakes, to prevent injury by cattle or other animals. The vine needs the support of the post until the tendrils obtain permanent hold of the limbs of the tree, and the body attains sufficient size to withstand anything that may come against it. The vines should not be set near the body of the tree, because the ground is already occupied by the roots of the tree—but directly under the extremities of the branches on the south side, where the vine will receive the warmth of the sun. If the soil is not first rate, it should be taken away and replaced with at least one cart load of rich sods from the roadside, which is much better than any highly manured soil for the vine or any fruit tree. Much has been written on the management of vines, with many precise rules for pruining, training, manuring, &c., which all amounts to nothing with farmers generally, who have no time to devote to such work. All that our native vines want is plenty of space to extend over, and plenty of air and sun, all of which they receive perfectly if they are allowed to run over the tops of the trees. Another advantage in planting vines in the situations that I have described, is that they are rendered more lasting, and will produce fruit for several generations, judging from specimens that I have seen growing in different parts of our country. Writers compute the age of the vine at two hundred years, and they have been known to reach a much greater age; hence in planting a vine we are doing work that need not be repeated soon in the same place if properly done. I. HILDRETH. *Seneca, April 7*, 1848.

Destruction of the Rose-Bug.

In the November number of the Cultivator for 1847, W. L. Eaton, asks how he shall most effectually destroy the rose-bug, one of the greatest pests that we have at present among us. In answering this question it may be well to glance at the description, and habits, of this insect, as described by Dr. Harris, in his "Report on the Insects of Massachusetts."

The natural history of the rose-chafer, was for a long time involved in mystery, but is at last fully cleared up. The unexpected arrival of these insects in swarms, at their first coming, and their sudden disappearance, at the close of their career, are remarkable facts in their history. They come forth from the ground during the second week in June, and remain from 30 to 40 days. At the end of that period, the males become exhausted, fall to the ground, and perish; while the females enter the earth, deposit their eggs, return to the surface, and after lingering a few days, die also. The eggs laid by each female are about thirty in number, and are deposited from one to four inches beneath the surface of the soil; they are nearly globular, whitish, and about one-thirtieth of an inch in diameter, and are hatched 20 days after they are laid. The grubs attain their full size in the autumn, being then nearly three-fourths of an inch long, and about one-eighth of an inch in diameter. They are of a yellowish-white color, with a tinge of blue toward the hinder extremity, which is thick and obtuse or rounded; a few short hairs are scattered on the surface of the body; there are six short legs, or a *pair* to each of the first three rings behind the head; the latter is covered with a horny shell of a pale rust color. In October they descend below the reach of frost, and pass the winter in a torpid state.—In spring they approach toward the surface, and each one forms for itself a little cell of an oval shape, by turning round a great many times, so as to compress the earth and make the inside of the cavity hard and smooth. Within this cell the grub is transformed to a pupa, during the month of May, by casting off its skin, which is pushed downwards in folds from the head to the tail. The pupa has somewhat the form of the perfected beetle; but it is of a yellowish white color, and its short stump-like wings, its antennæ, and its legs are folded upon the breast, and its whole body is enclosed in a thin film that maps each part seperately. During the month of June this filmy skin is rent, the enclosed beetle withdraws from its body and its limbs, bursts open its earthen cell, and digs its way to the surface of the ground. Such being the metamorphose and habits of these insects, it is evident that we cannot attack them in the *egg*, the *grub*, or the *pupa* state. The enemy, in these stages, is beyond our reach, but they must be either *crushed*, *scalded*, or *burned*, to deprive them of life, for they are not affected by any of the applications usually found destructive to other insects.—They should be collected *daily* during the period of their visitation, and should be committed to the flames or killed by scalding water.

It is not expected that we shall go into our *orchard* to collect these animals, but surely it is worth the trouble, to collect them in the garden, on the peach, the cherry, and the grape. The best instrument of destruction is an old warming-pan; fill it half full of live coals, and with a wing or your hand, brush or jar them into your pan: (this should be done in the cool of the morning.) In this way, with *patience* and *perseverance*, you will at least very much reduce the number; for every female you kill, you decrease the future number thirty fold. Hampden. *Hampden Co., Mass.*

Management of Fruit Trees.

Almost any kind of upland may be prepared for an orchard. For the apple, the most natural soil is that which is well adapted to corn, and requires but little extra preparation.

The poorest upland soil for an orchard is perhaps moist heavy clay. This must be prepared by draining off all the superabundant surface water, which may be done by open ditches or under draining. Set the trees on the top of the ground without any excavation; but if suitable holes are dug, fill up with rich loam, and if convenient add a mixture of slate and small stones.—Haul on earth of a loose rich mixture, and bury the roots rather deeper than when set in the usual way.—The failure of nearly all kinds of trees set in a stiff clay may be attributed in part to planting them too deep.—The holes prepared for the trees, form basins to receive the surplus water, which literally drowns them out.

In transplanting any kind of trees, keep the roots as moist as possible while out of the ground. In setting, the earth should compactly fill all the space around and under the roots, allowing each root and fibre to be buried in its natural position.

I would recommend high, rolling land, for an orchard on that part of the farm least wanted for tillage.* If the place selected be rocky, or the soil poor, it will require more labor, but two hands will soon cart on soil of the right quality enough to cover fifty trees. In common porous soil, let the trees be set with the upper roots about level with the common surface, add rich soil with stones to round up six or eight inches near the body. This will also aid, in some measure, to ward off the mice.

Arrange the trees so far apart that when full grown the top of one will not touch the others. At this distance, they grow faster, receiving more nutriment both from the earth and atmosphere. The fruit plucked from that tree which is supported by a full share of light and heat, will yield more of an improved flavor and color.

I have been made acquainted with but two extensive nurseries in the state of Vermont; these each contain over forty thousand trees. One of them is in Weathersfield, on Connecticut river; the other is in a lake town, conducted by Seneca Hazzard, of North Ferrisburgh. The latter is in a very promising condition, containing most of the valuable and popular varieties of apples, pears, plumbs, cherries, peaches, &c. S. W. Jewett.

Bleeding of the Vine.—Dr. Underhill stated before the New-York Farmer's Club, that the bleeding of the vine, so far from being injurious, seems to insure a good crop of grapes.

New and newly introduced Apples.

AUTUMN APPLES.

Autumn Strawberry, or *Late Strawberry*.—This variety, which originated in Western New-York, is one of the finest of all table apples. It is medium in size; roundish, slightly oblong-conical, obscurely ribbed; whole surface dotted and streaked with deep red; stem quite slender; calyx in a distinctly ribbed basin; flesh yellowish white, sub-acid, remarkably tender and very juicy, and of an exceedingly agreeable flavor. It ripens about six weeks later than the early strawberry, and is greatly its superior in excellence. The young trees grow more freely than any other known variety. A good bearer.

Gate, *Belmont or Waxen*.—This excellent apple has been known for many years in Ohio, and has borne several times in Western New-York. Its merits entitle it to the highest rank. It is rather large; varying in form, but usually ovate-conical, often roundish-conical or oblong-ovate, sometimes with a narrow or pointed apex, and at others quite blunt or rounded; a clear pale yellow, of a waxy smoothness, often with a rich, brownish cheek; stem varying in length and thickness, from scarcely two-thirds of an inch long and stout, to an inch and a-half long and slender; flesh yellowish, of fine texture, tender when ripe, somewhat compact, with a fine rich sub-acid flavor, somewhat resembling that of the Fall Pippin. Tree a free grower, and abundant bearer. Ripens late in autumn. The identity of this variety with the *Waxen* of Coxe, which is described as a "flat" apple, appears not to have been fully established.

Fall Orange.—Its origin is unknown. When well ripened *on the tree*, it is nearly or quite first rate in quality, and is valuable for its fair appearance, and the free growth and early and uniform productiveness of the tree. It is perfectly distinct from the Tallow apple, Orange or Lowell, of Onondaga and Oswego counties, N. Y. It is large, round-ovate, regular; light greenish yellow, becoming a light yellow, dotted with grey, and sometimes with a slight brown cheek; stem half an inch long; calyx in a basin with a smooth rim, and slightly plaited within; flesh, sub-acid and tender. In character it resembles the Cumberland Spice and the White Bellflower of the west, but is believed to be superior to either. Ripens during the last half of autumn.

Tallow Apple, *Orange or Lowell*.—Quite large, roundish oblong, approaching obtuse-conical, very slightly ribbed; green, becoming bright yellow; stem an inch long; calyx in an even rather deep basin, which is distinctly plaited within, while the rim is remarkably smooth and broadly rounded; flesh rather coarse, with a rich rather acid flavor—hardly first rate, but valuable from its free growth, productiveness, large size, and fine appearance. Ripens early in autumn, and may be kept a month or two. This variety has been cultivated at Cleveland, Ohio, under the name of Queen Anne.

Hawley *or Dowse*.—This fruit was first described and figured in the Cultivator, on p. 114, of volume IV. It was afterwards described in the Horticulturist a year ago. It is one of the very few apples of the largest size which prove to be of excellent quality. It ripens about mid-autumn, or a month earlier than the Fall Pippin, which it in some degree resembles; it is more tender in texture than the Fall Pippin, and consequently not so well suited to distant markets. It is a good bearer, and the fruit always fair. Being of a mild flavor, it is apt to be underrated when sent a distance. It originated in Columbia county, and has been considerably disseminated in Onondaga, Cayuga and Tompkins counties, N. Y. Considering all its qualities, it will rank fully equal to the Gravenstein and Fall Pippin.

St. Lawrence.—A large, handsome, and fair au-

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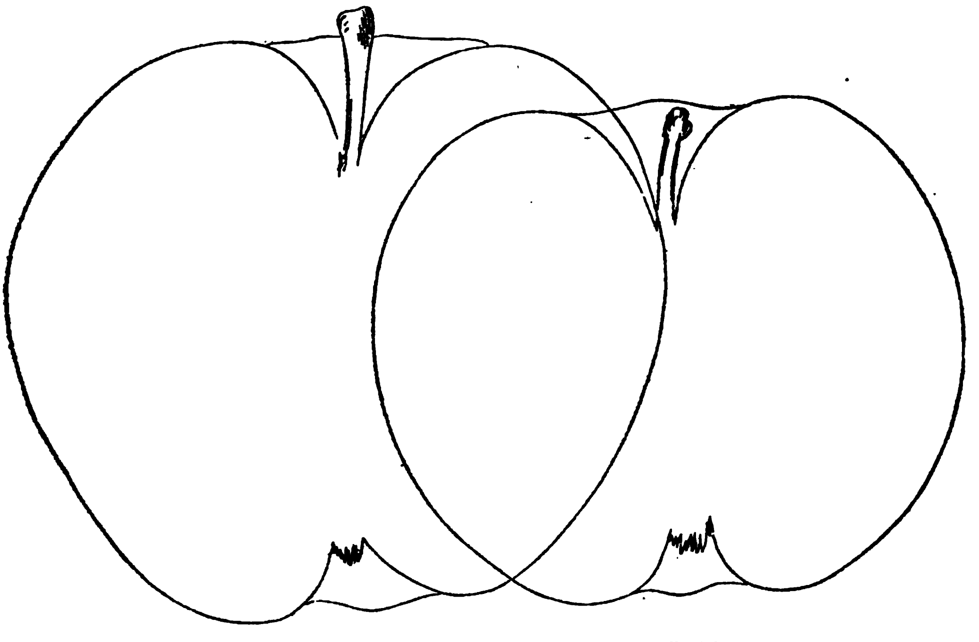
*This should be regarded as a matter of necessity, rather than of choice; as the best soil. kept in good tillage, will yield fruit in much greater abundance, and of much better quality, than a poor and neglected soil.—*Ed.*



Gate, or Belmont.

Leland's Spice.

tumn variety, much cultivated in the vicinity of Rochester, and originally from Lower Canada. It is hardy, productive and of free growth, and though usually very highly commended, we have never been able to place it above second rate. It is nearly round, approaching flattish-conical, covered all over with dark or blackish red broken stripes, which are remarkably distinct, and become very short and narrow as they approach the calyx; stem half an inch long; calyx in a rather deep, even basin; flesh very white, often with minute red streaks, tender, rather spongy, acid. Fine for market. Ripens mid-autumn.

Autumnal Swaar.—One of the finest *sweet* apples of autumn. Origin unknown. Large, flattish, rich yellow, usually a reddish brown cheek; stem often long and slender, sometimes short and rather thick; set in a wide, slightly uneven cavity; calyx in a wide, slightly ribbed basin; flesh very tender, yellowish, not juicy, with a very sweet, and agreeably spicy flavor. Mid-autumn.

Melon, *or Norton's Melon.*—Originated in East Bloomfield, Ontario county, N. Y. It was first described in the Cultivator of 1845, p, 56, by Ellwanger & Barry, under the name of Norton's melon; but as it originated in the Chapin and not in the Norton orchard, the first part of the name, which the rule of priority would otherwise compel us to retain, has been dropped. It has since been figured and described in Hovey's Magazine, the Genesee Farmer, and the Horticulturist. It is medium or rather large in size, roundish-conical, often slightly flattened, nearly the whole surface handsomely mottled and striped with full clear red, flesh white, tender, very juicy, with a fine, spicy, sub-acid flavor; when well ripened, first rate. The young trees are of remarkably slow growth. Although a fine variety, it is not equal in richness to the Gate, Fall Pippin, or Gravenstein, but is much admired for its juiciness and fresh, sprightly flavor.

Leland's Spice, *or Leland's pippin.**—Of excellent quality and great beauty of appearance, and cultivated so far as we know, only in the vicinity of Worcester, Mass. It is large, roundish, slightly conical, obscurely ribbed, very fair and smooth, with brilliant red streaks on a bright yellow; stem half an inch long, in a narrow, ribbed cavity; calyx in a ribbed basin; flesh yellow, tender, with a fine, spicy, sub-acid flavor—the New-England Farmer says "a high strawberry like flavor." It is a good bearer alternate years, and is decidedly a first rate fruit. We are indebted to S. H. Colton for specimens from Worcester.

Preserving Buds and Grafts.

The mode first suggested to us by T. G. Yeomans, of Walworth, N. Y., of preserving the scions of fruit trees in moist saw-dust, has proved superior to any other. It is better than damp moss, in the facility with which the scion may be perfectly imbedded in it, leaving no interstices; and it excells moist sand, in being lighter, more spongy, and entirely free from a grit which may injure a knife. We have without any difficulty preserved scions, which were cut in the summer for budding, till the following spring, and inserted them as grafts with entire success; and we have kept winter-cut grafts till midsummer perfectly fresh, and employed them successfully in budding. A bushel of saw-dust will retain its moisture for many weeks nearly unaltered; but water must not be applied too copiously, or water-soaking and decay will be the result. The north side of a building, or a cool cellar, is the best place.

Salt for Celery.

Plants of Celery were exhibited the past season, at a meeting of the Cincinnati Horticultural Society, to show the benefit of salt as manure for this vegetable. Those without salt, treated in the ordinary way, were not unusual in size or quality. The root and plant of the other, which had received the benefit of salt, was fourteen inches in circumference and weighed fourteen pounds without the leaves, and of excellent quality.

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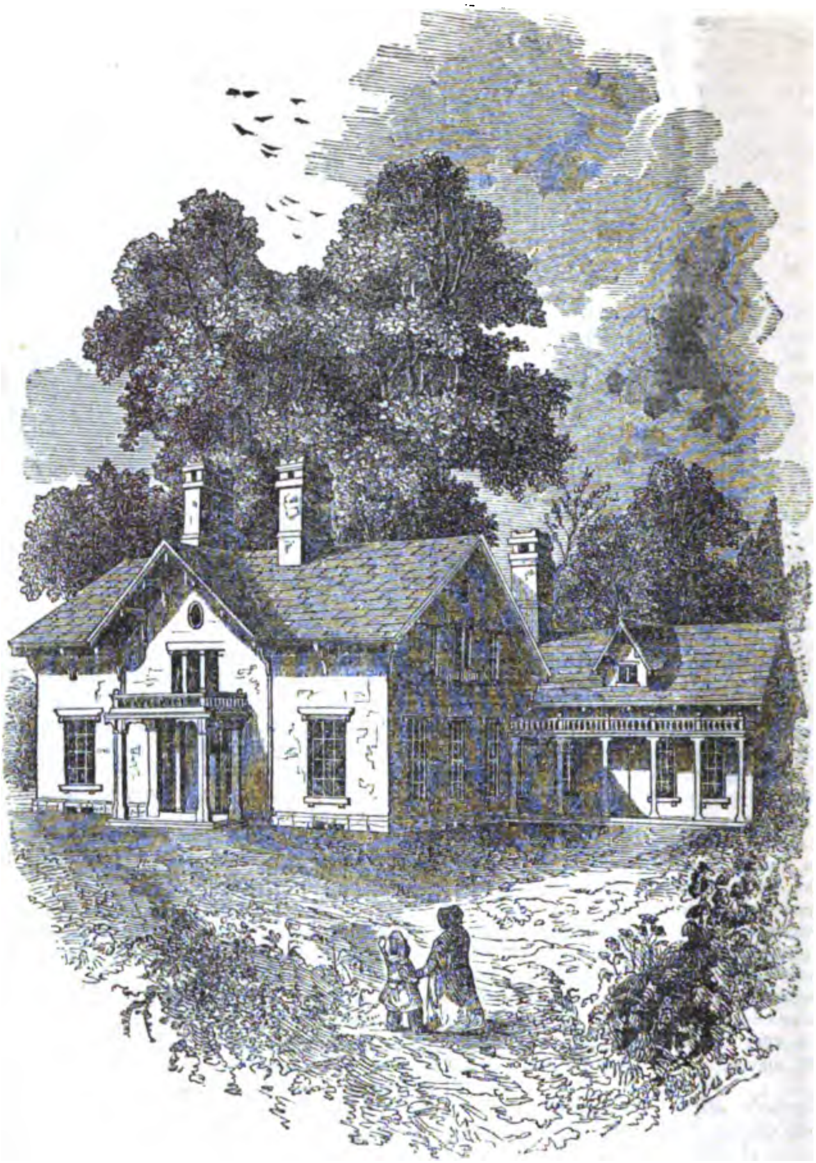
* The Editor of the New England Farmer remarks, that as this is a *red* apple, it should not be called a *pippin*. What is the meaning of the word "pippin?" we have more than once asked the question, and have not received an answer. It cannot refer to the shape,—for the American and the Downton pippins are flat, while the Ribston and and Sugarloaf are conical; it cannot indicate size, for the Downton and Golden are very small, and the Fall and Monstrous pippins are very large; color is not regarded,—for the Newtown is green, the Golden is yellow, and the Ribston and King of the Pippins are red; nor season,—as the Summer is early, the Newtown late, and the Eastern pippin "keeps two years;" nor flavor, the Blenheim being sweet, and the Ribston acid, &c. We should therefore be glad to see a good definition.



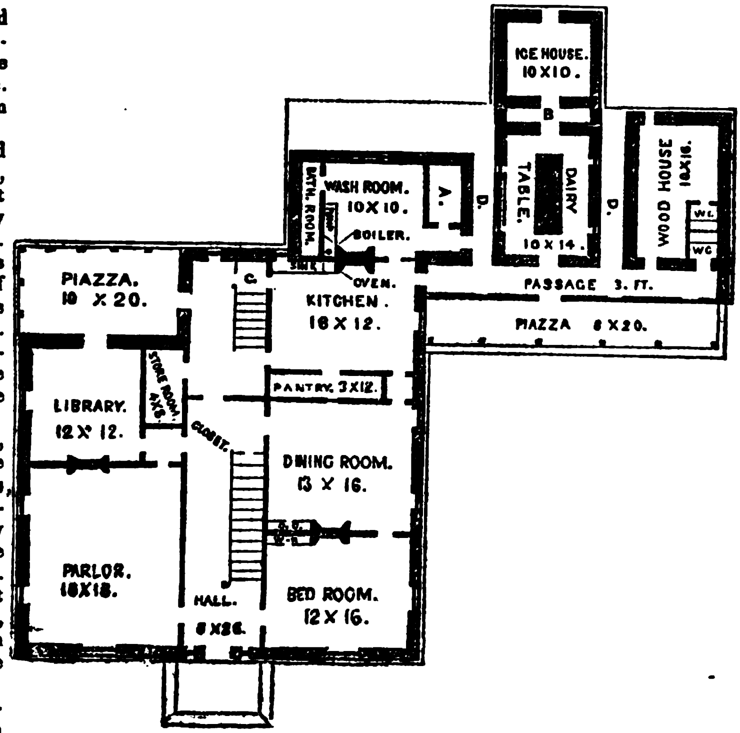
PLAN OF A FARM HOUSE.

The accompanying plan received the premium of the New-York State Agricultural Society, at the January meeting, 1848. The main object of the projector has been to furnish the best *ground-plan* for a complete farm house. The style of finish being regarded as a secondary matter, may be chosen according to the taste and circumstances of the builder. The representation here given, is ornamental, and at the same time compatible with convenience and comfort.

The committee on Farm Dwellings, &c., in submitting their report, make the following remarks in reference to this design: "The ground plan gives an excellent and convenient arrangement, which could not be better described than in the lady's own words. The committee would say one word on the mode of warming houses by means of heated air from a furnace, which is adopted in the plan offered. The same correct notions of conveniences and comforts, that suggested in the plan many of its arrangements, also suggests this most effectual, most economical and least dangerous method of throwing a summer heat into all parts of even a large building. This supercedes all fires, excepting that essential bed of living coals in the kitchen."

We extract from the *Transactions*, the following description of the plan.

The accompanying plan is designed to front south, with an elevation of thirteen feet from the sills to the roof. It should occupy somewhat elevated ground, sloping a little to the north, and should be raised on an underpinning to suit the ground. To give chambers to the size designated, the apex of the roof should be not less than twenty-two or twenty-three feet above the sills. It is highly proper to leave a *space* for air, between the finish of the chambers and the roof, which will prevent the rooms from becoming heated in summer.



Ground Plan.

The site should be selected with a view to the easy construction of drains from the sinks, bathing house, dairy, &c. directly to the piggery or barn yard.

It is of course expected a good farmer will have a good cellar, and in some situations, the best way of warming a house is by a hot-air furnace in the cellar. The size of the cellar and its particular divisions, should of of course depend on the wants or circumstances of the builder. In some cases it may be expedient to have it extend under the whole of the main body of the house.

It may be observed, however, that it is not advisable to store large quantities of vegetables, under dwellings, as the exhalations from them, especially when unsound, are known to be decidedly prejudicial to health. Hence the *barn cellar*, and not that of the dwelling house, should be the repository of such vegetables as are wanted for the use of domestic animals.

Directions in regard to warming houses by furnaces, may be found in works relating to the subject, or may be obtained from persons engaged in their construction. There are various modes; but my own experience does not enable me to decide upon their relative advantages.

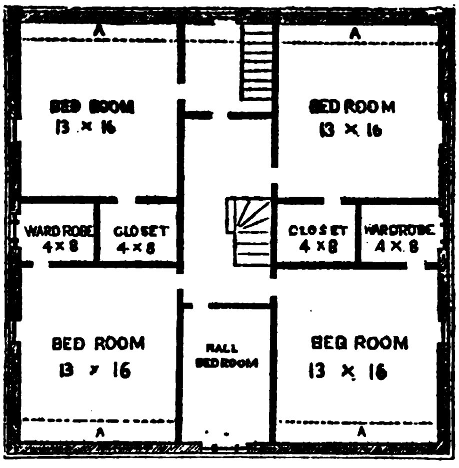
In the construction of this plan, it has been my object to combine utility and beauty, as far as practicable with the *labor-saving* principle. In the arrangement of the kitchen and dairy, particularly, special regard has been had to securing the proper requisites for those important departments with the greatest practicable degree of convenience.

In constructing a dairy, it is proper that such an excavation should be made as will leave the floor, which should be made of stones, two or three feet below the surrounding surface. The sides should be of brick or stone, and plastered; the walls high, and the windows made so as to shut out the light and admit the air. The advantage of *thorough ventilation* and pure air is acknowledged by every one who has ever paid attention to the manufacture of butter, though it is a matter generally too little thought of, in the construction of apartments for this purpose. It will be observed, that in the plan herewith submitted, an open space of two and a-half feet has been provided for on three sides of the dairy.

To render the establishment as perfect as possible, the command of a good spring of water, which may be conducted through the dairy-room, is necessary; when that cannot be had, an ice-house in *direct contact*, (as in the accompanying plan,) and a good well of water convenient, form the best substitute.

The expense of such a house in this vicinity might be varied from fifteen hundred to three thousand dollars; according to the style of finish, the taste and ability of the owner, &c. The main conveniences may be retained at the lowest estimate, by omitting the ornamental front.

M. W. HOWARD.



Second Floor.

COMPOSITION OF MILK.—According to JOHNSTON, every hundred pounds of milk contain about half a pound of salines; the 100 pounds contain about 10 pounds of solid matter, and the proportion of ash in this solid matter is about one-twentieth of its whole weight, the analysis of which is given as follows:

Phosphate of lime,	23 1
Phosphate of magnesia,	4 2
Phosphate of iron,	0 7
Chloride of potassium,	14 4
Chloride of sodium,	2 4
Free soda,	4 2
Total,	49 0

THE FARMER'S NOTE BOOK.

To Farmers.—No. III.

No greater inconsistency is presented in the whole system of our Common School education, than in the want of studies suited to that part of our population engaged in Agriculture. Three-fourths of the whole number attending our Common Schools, eventually resort to Agriculture as the business of life, and nine-tenths are either directly or indirectly engaged in farming or gardening at some period of their lives. And yet, in most of these schools not a single study is adapted to prepare the scholar, or inform him, upon subjects immediately connected with this pursuit The whole instruction appertaining to this subject, usually obtained by our farmer's sons, before called upon to act for themselves, is that derived from the labor exacted from them at home, during their minority, and their knowledge of farming is generally limited to the experience and the practice pursued by their parents and guardians. Too often now, it is to be feared, the child looks upon the employment, as a mere servile labor, rather than a pleasant occupation, and one of all others, best suited to his happiness. Being entirely ignorant of the first elements of Agriculture, as a science, he scarcely knows for what end his labor is bestowed.—"As the twig is bent the tree is inclined." Were this maxim properly acted, the first efforts would be to give children early instruction in some simple and appropriate studies, suited to the business of Agriculture, so that they might labor understandingly, in whatever they should be called upon to do in these pursuits, when young. The effects of such education would soon become manifest, and the instruction so acquired, would be of incalculable service to them in after life. With the knowledge of the necessary means to be used to make, and keep, their lands fertile, a large increase of produce might be realised from the improvement of them. and the increasing demand for market, be more certainly met and supplied; and we should see fewer persons willing to leave their present comfortable homes, and encounter the hardships incident to the removal to a new country, in anticipation of improving their condition. An Agricultural education is daily becoming of more and more importance to all who remain in the older settled portions of our country, to enable them to compete with the surplus productions of the rich land of the west. As a means of judging of the capability of many of our lands to produce a very large increase upon what they now do, let any person look into his own neighborhood and he will find no difficuly in selecting fields producing from two to three tons of grass per acre, while perhaps the adjoining field, no less capable of producing the same amount with proper culture, now scarcely yields a ton per acre, and so of other crops. In the reclaiming of low and wet lands, by means of draining, a large amount of productive land might be added to that now cultivated. There are not wanting many examples in our own state where, by means of judicious draining, large tracts of land have become among the best of our farming land. Part of the land formerly known as the Canastota Swamp, is a marked example of this kind. The renovating of old and worn out lands, that have been plowed for a long succession of years, by deep tillage and proper manuring, would be another means of greatly increasing the agricultural productions of our farmers. Many instances of this kind are familiar to those acquainted with the lands along the Mohawk river. When our farmers shall generally be so educated, that they can with a knowledge of the Science of Agriculture, put forth their energies to accomplish the end desired, we shall be disappointed if the results anticipated by such an education, do not fully meet the most sanguine expectations of its most zealous advocates. Oneida.

Spare the Spider.

I like the spirit of the article which appeared in the June Cultivator, inculcating kindness and attention to birds and toads for their usefulness in the garden. I desire to say a word in behalf of another useful friend of man, but whose friendship is met with almost unrivalled enmity and ingratitude. I mean the *Spider*. I do verily believe that, without his ceaseless vigilance, his untiring alertness, his wary cunning, his sagacious ingenuity, his fierce daring, and his voracious destructiveness, *it would be impossible for man to get enough out of the earth to save himself from starving!* Look at your garden and your fields, and see the endless variety of them, and their countless numbers, constantly in pursuit of prey, which they devour with unappeasable voracity, and say where would be the end of the ravages of pernicious insects if it were not for their relentless war upon them. And yet, there is not one man in five hundred, on finding one of them in his way, who, instead of touching his hat to him and giving him the walk, will not waste strength enough to knock down a steer in smashing him out of existence. They are sacred in *my* household, spiders are. If they accept the invitation of open windows, and walk into the parlor, and set up shop to the blemishment of good housewifery, they are considerately taken upon a broom and waited upon to the door, with thanks for their good intentions and regrets that their services were not wanted in that department, and a friendly suggestion at parting that they can do a better business elsewhere. But they are tolerated in the kitchen in a sly way, on account of the love they have for the society of that enticing little creature, the house-fly. I teach my children to destroy ruthlessly, almost every other creeping or winged insect, but to *spare the spiders*.

There is the large, round bodied spider, who suspends his circular net vertically in every angle about the house and out houses—a lazy old fellow to look at, but woe to the flutterer that touches his toils. The house-fly is the special object of his regard, and hence he is seldom found far from dwellings. There are many varieties, large and small, which adopt his mode of entrapment. Splendid specimens, in size and variety of decoration, abound in the woods and meadows, whose nets are almost tenacious enough to hold a bird. The largest kind of bugs and grasshoppers fall an easy prey to these.

Then there is the *garden spider*,—so called, I suppose, because he is found indiscriminately and abundantly around every dwelling, and barn, and wood, and field—with long slender legs and body, the latter faintly striped with buff down the sides. He spreads a compact sheet, horizontally, with well formed tubular avenue leading to his dungeon, at the entrance of which he grimly awaits the approach of some thoughtless wayfarer, who is dragged into it with inconceivable rapidity the instant he alights upon the tempting surface. He is not particular in his diet.

One of the most interesting of the race, is the small *transversely-striped spider;* very properly, from his appearance and mode of seizing his prey, called the *tiger spider*. You have seen him on the sunny side of a building before now, on the alert for insects which resort there for warmth and pastime. Here is one now, a fly has just settled within a few inches of him. You scarce saw the instantaneous motion with which his head was presented to his game as it alighted. Mark the oily, sidelong movement with which he gains a place above him, and now see the cautious, stealthy, almost imperceptible motion with which he advances—nearer, nearer—there! a leap of eight times his length, and he has him! Was ever anything more tiger-like?

But there is another chap who most excites my admiration. He is a small brown fellow with a light body and long legs; and he has a peculiarly pert way of standing on the very ends of his toes, bearing his body high up. He is the true sportsman of his race. He scorns the adroit stealthiness of the last, and holds all devices for entrapping his game in infinite disdain. He takes his position on a standing board, or in the garden walk, when the sunshine falls thick upon it, and as the creature of elegant leisure drops down to enjoy a moment of luxurious repose, he darts upon him with the celerity of lightning, and with an assurance of success, that seems utterly unconscious of the possibility of failure,—it scarce mattering what degree of space intervenes. I have rescued his victim almost on the instant of his seizure, but he was stone dead. Venom as virulent as the scorpion's, had pervaded his system.

There is also a spider of magnificent proportions, robed throughout in richest black or dark brown velvet. He roams everywhere. I have seen him in the woods, bearing off a centipede twice his own size, with the royal air and ease of a lion conveying a stag to his quarters. He is fierce, fearless and indomitable, and is said to hold equal combat with the toad.

My attention was once arrested by a small, compact irregular mass of dirt, moving off upon the floor with mysterious alacrity and regularity. On examination, I found it to be a small spider, whose body had a peculiar glutinous secretion, to which particles of dirt and sand adhered—thus effectually concealing his personal attraction. I have never but once since met with this curiosity. Doubtless many a young rat among insects has rued the day that he mistook "that white heap yonder" for something as harmless as "meal."

All these, and an infinite variety of others of this active and intelligent race, are constantly laboring for the welfare of man. Again, I say then, SPARE THE SPIDERS. J. C. H.

Syracuse, 12th June, 1848.

A Rhode-Island Premium Farm.

Mr. THOMAS ANDREWS, of Smithfield, obtained the premium offered for the best cultivated farm, by the Rhode-Island Society for the Encouragement of Domestic Industry in 1847. The committee who examined this farm speak of it in high terms. It had been in the possession of Mr. ANDREWS ten years, and the committee say, that having been familiar with it in former years, they "were not less surprised than gratified with the striking change that has been effected by its present owner." They say further—"The farm throughout shows skilful, sound, and clean husbandry; the buildings are nearly all in excellent condition, and the many contrivances within doors, and without, for abbreviating labor and economising time, for the comfort of the family, and for the humbler tenants of the stable and the sty; and especially, the arrangements for the collection and preservation of everything that can be converted into manure—all indicate the orderly, pains-taking and industrious farmer; and show that while he keeps a steady eye upon everything that can be turned to profitable account, he is not unmindful of the higher duty of rendering his home agreeable and respectable." In regard to Mr. A.'s mode of feeding his animals, the committee remark that he has gone on the "sententious advice of an experienced old farmer, '*feed high.*' He has always acted upon this plan. Every animal upon his premises, biped and quadruped, is well fed and full fed. His cattle are not lank, hide-bound, costive and cross, but fat, sleek and kindly."

We make the following extract from Mr. ANDREWS' statement to the committee:

"My farm contains 113 acres. There are about 50 acres of arable and reclaimed land, 30 acres of pasture, and the balance is mostly in wood.

"When I bought the farm, the buildings and fences were out of repair. The land had been so long cultivated with very little manure, and that probably applied in the hill, it was in a very poor and run down condition. There were not more than two cords of manure on the place. The first summer I raised 40 bushels of potatoes, and 60 of corn. I kept four cows, a pair of three year old steers, and two horses, but was obliged to buy three tons of hay to carry them through the winter. Since that time, I have depended upon the resources of the farm and stock for manure, except two hundred and nine dollars worth of stable manure, and about two thousand bushels of ashes which I have bought. The present condition of the farm will be sufficiently indicated by the following enumeration of its products the present year—the prices are such as I have actually sold the articles at, or can now command for them.

80 tons of good hay, from 30 acres, 12 acres yielded 36 tons, $14, ...	$1120 00
3 tons swamp hay, $5, ...	15 00
8 " oats, on 4¼ acres, cut green for fodder, $12, ...	96 00
2 " rye straw, $6, ...	12 00
Corn stalks and husks from 5½ acres, ...	50 00
283 bushels Indian corn, $1, ...	283 00
32 " rye, $1, ...	32 00
600 " Potatoes sold, averaging 65c., ...	390 00
400 " " on hand, have been offered 75 c, ...	300 00
90 " " small, 25 c., ...	22 50
1000 lbs. winter squashes, 2c., ...	20 00
87 bushels winter apples, ...	36 00
3 " quinces, ...	6 00
29 loads pumpkins, ...	29 00
7 bushels white beans, ...	10 50
Small fruits, $15.74, ...	15 74
Sweet corn, $5, ...	5 00
43 bushels fall turneps, 33 c., ...	14 19
Garden vegetables, of various kinds, ...	25 00
	$2481 93

"I now keep 4 oxen, 12 cows, 2 horses, a bull, 20 shoats and 2 hogs.

"The following answers to your queries will show my mode of cultivation.

"1st. Depth of Plowing.—I plow 8¼ inches in all cases where it is possible, and in some loamy soils deeper.

"2. I used the subsoil plow last year on a field of 6 acres; subsoiling 4, and leaving 2, as an experiment. I plowed with a common plow, 7 inches deep, and followed with the subsoil 20 inches—stirring the earth 27 inches—sowed oats and grass seed. The *oats* were very large, on all the six acres, averaging 5 feet high, and there was no perceivable difference in the oats by subsoiling.*

"3. Rotation of Crops.—I find planting Indian corn more than one year on the same land makes but little difference to the crops, but almost every other kind of grain does not do as well. Rye is more apt to blight, and potatoes are sure to fail the second year. I have not generally got more than half a crop from second year's planting.

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* The grass was a week later on the part of the field that was subsoiled: there was less clover, but more herds grass and red top; the yield of hay was somewhat greater.

"4. Indian Corn.—I cultivated for five years the *white* cap corn of medium size, and deep plowing and manure caused it to grow larger and later. I also tried the *yellow cap* corn, but I find the white to have less weight in cob, and more fodder than the yellow. Last year I planted two acres of the white and yellow mixed equally, and found the result was in favor of the *mixed* corn. It was heavier than either white or yellow, by three-fourths of a pound to the bushel. I generally plant green sward, plow late in the spring, as plowing in the fall by freezing and thawing, the soil becomes wasted by winds blowing, &c. By plowing late in the spring the corn is never injured by the grass worm. I plant my ground but one year if I can get the sod rotten enough to seed down. If I plant two years, I plant potatoes first and corn afterwards, as the land will decidedly take seed better after corn than after potatoes—but by planting only one year the grass crops will last longer than if planted two years. I plow in the manure about the middle of May, roll with a heavy roller, and mark the rows with a light plow 3½ feet by 3, and put five grains in a hill, at second hoeing, leave four the healthiest plants to grow. I hoe as soon as the corn will admit—hoe three times. Work with cultivator between the rows, twice hoeing, but at the third hoeing it breaks down too much corn to work a horse between the rows. I make no hill, but keep the surface as level as possible, that the brace roots may hold it from blowing down, as in hilling the brace roots cling to the hill and are torn up easily, and if the season be dry, it is much more liable to suffer from drought. I commence cutting the stalks, as soon as they are ripe enough to cut for the milch cows, and continue using them for feed till they become too dry, as they are worth double to feed green, than in the winter when dry. By this method of cultivation I raise from 40 to 70 bushels per acre, and sometimes even more."

Preservation of Animal and Vegetable Substances.

A valuable process for preserving various substances, is noticed in the English papers. It consists, 1. In an improved method of applying rapid currents of heated air to the drying and preservation of vegetable substances. 2. An improved method of applying rapid currents of heated air to the preservation of meats.—3. An improved method of applying heat to the preservation of the edible matter contained in eggs.

Vegetables, such as carrots, turneps, parsnips, &c., are first washed and scraped, then sliced by hand or machinery, and laid in thin layers on trays with hair cloth or lattice work bottoms, and the trays placed on racks, one above another in the heating-chamber. When thoroughly dried they are to be put up in packages; or before packing they may be reduced to a fine state;—but the packages should in all cases be air-tight. Potatoes are preserved by first boiling or steaming them, and after being peeled, reduced by mashing or otherwise to a state fit for spreading in thin layers, upon trays of the same description as those employed for the articles above named. The trays with the substance are exposed to currents of heated air, at a temperature of about 150° (Fah.) till the substance is thoroughly desiccated. If the substances are of small size, such as peas or beans—they are exposed in their entire state to the rapid currents of heated air.

Meat, when bulky, is first cut into slices of about half an inch thick—the slices hung on lines or nails, exposed to the currents of heated air—the temperature 120° to 160°. All moisture is by this means completely expelled from the meat, and its albumen at the same time, firmly coagulated. Meat which has been so treated, will continue for a long time, under ordinary circumstances, in a perfectly wholesome state; but if it is intended to be exported to damp or variable climates, it is recommended to apply a little highly-diluted pyroligneous acid, or some other approved antiseptic, to prevent it from reimbibing humidity; after which it should be subjected to a further heating in order to free it from any moisture it may hold. To ascertain when the meat is perfectly dried, a portion of it may be weighed at intervals, and when it ceases to show any diminution of weight, the process may be deemed complete.

To preserve eggs they are taken from the shells, the white and yolks intimately mixed together, and about an equal weight of wheat flour, ground rice, or other farinaceous substance, is added to them, and the whole beat into a uniform mass, which is spread upon trays of horse-hair cloth or lattice-work bottoms. The mass is then exposed to a temperature of about 180°. When thoroughly dried, the mass is reduced to the state of flour, and in that state packed up for use. The eggs may be preserved in their entire state, denuded only of their shells, the yolks and whites being dried and reduced to a state of flour without any intermixture with other substances.

Cultivation of Forest Trees.

The natural scarcity of timber in some sections of this country, and its prodigal waste and destruction in other sections, have already occasioned the necessity of artificial plantations. This mode of producing forests has long been successfully practiced in England, and some trials which have been made, lead to the belief that its results would be equally as favorable here.

In the Transactions of the Essex (Mass.) Agricultural Society for 1847, we find a valuable essay on the Cultivation of the Oak ond other Forest Trees, by G. B. PERRY. This essay received a premium from the Society. We present the following abstract of the principal points set forth by Mr. P. His remarks are chiefly confined to the cultivation of the oak.

It is recommended that acorns for planting should be taken from trees of the right kind, which stand at a distance from other oaks of a different kind. This is important on account of the hybridization which takes place when the different kinds grow near each other. Mr. P. thinks there is scarcely any tribe of forest trees in which this process is carried on to that degree as in the oaks.

The kind of oaks deemed most proper for cultivation, are the white, grey, yellow and black. Each of these has its peculiar properties, and is calculated for purposes for which the other kinds do not answer so well.

In regard to the questions, how the acorns should be managed for planting, and whether they should be planted in the fall or spring?— Mr. PERRY, after fully considering the various modes, decides that it is best to gather the acorns as soon as they are dropped, put them in a box with earth and let them freeze hard; after which they should be kept till spring in a cool, shady place, covered thick with straw.

The question has been considerably discussed whether young forest trees should be cultivated—that is whether the ground should be loosed around with the plow or other implements; Mr. P. is of opinion, that when "the *right* culture" is bestowed, its effects are equally as useful on the "wild trees of the forest, as on the reclaimed ones of the orchard." In attempting the cultivation of the oak, injury has sometimes been done by breaking off the roots and otherwise mutilating the trees. Care should be taken in this respect—especially that the implements do not run too deep.

It is advised that trees should be cultivated in a nursery till they are five or six years old, and then transplant them to an open lot. Mr. P. thinks it is not unlikely that they may sometimes be kept in the nursery with advantage till they have attained the age of ten or twelve years.

In regard to heading down, pruning. &c., Mr. P. observes that from what observation he has been able to make, he is convinced that the top first thrown out almost invariably dies, "either before or after a new sprout from near the earth starts forth," and he thinks the process of nature is only seconded by art, when the top of a seedling oak, whether in the field or in the nursery is taken away to facilitate a better shaped and more vigorous growth. He has had long experience in raising trees of different kinds, and he is confident of the advantages of this process. He observes "I have in my nurseries but few trees which I supposed would not be improved by removing the top after having attained the age of three or four years. I have sometimes judged it necessary to subject them to a second and in some instances to a third process."

In regard to the question; how long it takes an oak to reach its ordinary growth? Mr. Perry observes that there are not enough well attested facts to enable him to speak with definiteness. He thinks particular inquiry should be made in reference to this point. One instance, however, is mentioned, which is worthy of notice. Four oaks, forty years old, stand on the side of a hill—the soil a sandy loam. The largest is estimated to contain over a quarter of a cord of wood.

"Of the general fitness of our soil for the production of the oak in its full size and greatest strength, we have pleasing demonstrations in the majestic trees of this species which still remain scattered over most of the country, as well as in the safety with which our own majestic ships, built of our wood, and fashioned by the wise craftiness of our own men, have resisted and out-lived the mighty lifting up of the ocean wave."

The general advantages arising from planting forest trees are thus summed up in concluding the essay:—"If we value, therefore, the wealth or happiness of those who come after us, or regard the estimation in which we shall be held by those whose gratified feelings and kind remembrance we wish to secure, we can take no more wise and sure course than to cover our hills, ornament our plains and fill our valleys with a rich proportion and pleasing varieties of the forest trees. Mixing those that put forth their freshness in the spring, with those which by their evergreen foliage maintain in the winter season, a pleasing contrast with the whiteness of the drifting snow. With such an inheritance handed down to them, our children's children made glad by the glory and beauty which they see around, will say that we, their fathers, were a wise and understanding people."

Effects of Ashes.

Messrs Editors—Last fall I had a compost heap of manure and muck in preparation for covering my seed-beds of plums, apples, pears, &c., and a quantity of corn-stalks and weeds were thrown on the top of the heap and set on fire. A shower came up and we left it, but the top of the heap being quite dry, it kept burning all night and half of next day. The ashes were spread over a part of a long bed of plum stones in my nursery, and the effect is visible to this time, the young trees looking darker and are much larger than the others where the unburned compost was put. Still they had the ashes of a larger quantity than was given to the rest, though when applied I thought them worthless, and only put them on as an experiment. Charles Hamilton. *Canterbury, N. Y., July* 10, 1848.

Comparative weight of good and poor milk.

Having frequently heard various opinions expressed in regard to the comparative weight of good and poor milk, and having never seen an account of its being tested, I resolved to try the following experiments:

9½ qts. cream, 19 lb. 2 oz., which made 11¼ lb. butter.
9½ " N. milk, 19 " 2 oz.
9½ " S. milk, 19 " 10 oz.
9½ " water, 19 " 2 oz.

Relative proportions of milk and butter.—By referring to my books, I find that in 1839 I made the following trial from four cows in two days.

Cow No. 1, 21qts. milk, 2lb. 1oz. butter, 1 4-7oz. pr qt.
" 2, 23 " 1 13 " 1 1-4 "
" 3, 20 " 1 4 " 1 "
" 4, 18 " 1 12 " 1 5-9 . "

About the same time I weighed a single quart of new and skimmed milk, each, and could not perceive any difference in the weight of so small a quantity.

Edward Clark.

Waterbury, Ct. July 1, 1848.

[The above is a good illustration of the fact that the quantity of milk does not indicate the quantity of butter it will afford. Eds.]

Chemical Names.

Substances in organic chemistry, the names of which are frequently used by scientific writers, explanations of which many readers may find convenient and useful.

Acroleon—the substance generated by the decomposition of fat, when highly heated, causing the disagreeable smell usually noticed.

Ambreine—principal ingredient of ambergris.

Amygdaline—a substance in almonds, peach-kernels, &c., yielding by decomposition oil of almonds and prussic acid.

Arabine—gum arabic,—forming with water, mucilage.

Camphene—the true oil of turpentine, obtained from common turpentine, and having power to unite with muriatic acid, forming what is called artificial camphor.

Caseum, or *Caseine*—the curd of milk.

Cerasine—chief ingredient of cherry gum.

Cerumen—wax of the ear.

Colophony—the compound rosin which remains when the crude turpentine from trees is distilled.

Dextrine—a gum, formed from the starch of seeds in vegetation—or by starch and sulphuric acid.

Faradyn—the lightest liquid known—weighing only thirteen-twentieths of its bulk of water—obtained by distilling india rubber.

Glycerine—a principle or constituent of all fats, and of their ingredients, stearine, margarine, and olein.

Inulin—starch from elecampane, dahlia, dandelion, &c.

Lactine—sugar of milk.

Legumine—extract of beans and peas, with properties intermediate between gluten and albumen of wheat.

Lichenine—starch from Iceland moss and other lichens.

Lignine—principal ingredient of woody fibre.

Palmatine—a peculiar stearine in palm oil.

Pyin—the liquid, which, united with albumen, forms pus.

Sinapisine—the pungent principle of mustard seed.

Stearine—a constituent of fats—most of them being stearine and margarine, with a simple oil, olein.

Tuebene—a liquid obtained from turpentine.

Xyloidine—a very combustible compound, formed by combining woody fibre with nitric acid.

Management of a Dairy Farm.

Mr. Chauncey Beckwith, of Columbia, Herkimer county, presented to the Agricultural Society of that county, in 1847, the following statement of the products and expenses of his farm for that year. It affords an excellent example of the advantage of system and economy, and shows what even a "slender man, not able to do heavy work," may accomplish, provided he has the MIND for it. We copy from the *Transactions* of the N. Y. State Ag. Society.

My farm consists of 100 acres, situated seven miles south of the Erie canal, and is about 900 feet above its level. I have 85 acres under improvement, on which I have kept 2 horses and 21 cows; 37 acres to pasture, 35 to meadow, 8 to oats, 2 to corn, 1 to wheat, 1½ to sowed corn, 8½ to potatoes.

Account Current.

Made 12,000 lbs. cheese, sold at 7 cts., weighed in the fall and well cured.		$840 00
Sold apples,		40 00
do butter,		20 00
Calves' skins,		10 00
		$910 00
Interest on 4,000 pd. for farm,	$280 00	
do 400 do cows,	28 00	
do 150 do horses,	10 50	
do 150 do utensils,	10 50	
	$329 00	
One hand 7½ months, $12,	90 00	
Paid for days' works,	40 00	
do hired girl, 35 weeks, $1.12½	39 38	
do mechanics' bills,	20 00	
do shorts for cows,	20 00	
do plaster,	12 00	
do cheese boxes and bandage,	35 00	$585 38
		324 62
Permanent improvements, stone wall, &c.,		50 00
		$374 62
Seed grain not taken into account, as it is the product of the farm from year to year.		
Family expenses, besides appropriating a portion of the products of the farm for such purposes,		120 00
Net profit,		$254 62

I make this statement not for the purpose of boasting, but with a hope that other common farmers will be induced to make similar statements. It is believed that the statements usually made and published, are of farms in a very high state of cultivation, and if not extravagantly made, show a large yield and large profit, better calculated to discourage than to encourage farmers in moderate circumstances. The soil of my farm is gravelly loam, the timber mainly beech and maple, with elm and basswood, eighty acres under improvement; have kept cows two seasons: when I commenced, the farm had been for several years fed close by sheep, and was not in a good situation for keeping cows. My family consists of myself, wife, and four small children. I am a slender man, not able to do heavy work; have made the cheese and done some chores. Have kept my cows always in good condition; have fed hay usually during winter; when I feed straw, some meal is fed, so as to make the keeping equal to good hay; from about the first of March, I feed two quarts of corn or barley meal to each cow per day until the pasture is good; they are kept in good stables, and during summer are put up night and morning in a milking barn, near and convenient to the cheese room, and fed the whey with meal or shorts, the quantity depending on the situation of the pasture; commence feeding corn about the middle of August once a day, and the whey with shorts or meal once.

This fall after the corn was injured by the frost, fed a half bushel of apples to each cow per day, and late pumpkins, continuing to feed the whey, with shorts or meal, until they were dried off; have kept twenty cows for the dairy and one for the family. The yield of cheese per cow the past season, six hundred pounds, sold at seven cents; I think the extra feed, made at least one hundred pounds per cow; the cost of shorts was one dollar per cow; the meal being the product of the farm has not been in any manner taken into the account. The season has been dry and not favorable for dairying. I am convinced that good feeding pays well; the milk drawn from the cow is a monstrous draft, and if they are not well fed, they will run down and be poor in the fall, and the yield of milk small during the latter part of the season. The practice of sowing corn to feed in the fall, should, and I think will become general; if cows are well fed, they will be in good condition in the fall, which enables us to turn our old cows and such as are not good milkers, for beef to good advantage. I should put the cows up to milk if I did not feed; the trouble of feeding after they are up, is not great. The whey runs from the box in which the cheese is made, into a vat, and from that, by pump logs it is drawn into pails in the alley of the milking house. The cows being in two rows, with their heads to the alley, and a tub for each; the meal bin is at one end of the alley; from this to the cheese room, a distance of some ten feet, plank are laid to walk on, and a temporary roof over, so that we pass from the milking house to the room where the cheese is made, without being exposed to rain or mud; still this space is open for the circulation of air. I should feed my cows during summer, if it did not add to the quantity of cheese, as it is a satisfaction to see them look fine, and in knowing that they feel comfortable. Chauncey Beckwith.

Writers for Agricultural Papers.

There appears to be a desire among many writers and readers of Agricultural papers to interdict from the columns of the press all writers who are not rigidly practical men, and to my comprehension this is an error that should be discountenanced.

Are we to weigh every measure every thing by its mere worth in dollars and cents? True, a man may be practical in the growing of flowers, or the dressing of a set for a finger-ring or a breast-pin, and might be admitted on the one hand as practical, or on the other as one who has grown rich. Yet there may be others much better qualified to give directions than either the one or the other. Were a man required to teach one how to handle a spade or a hoe, then we might look for the practical man. Or were we giving lessons in making money, then the man who would best give demonstrations how to live on nothing, and spend no money for comfort or luxury, would be the man to look for.

The great bug-bear is theory; that is the stumbling block. Now this thing of theory is as essential to the thinking planter or farmer who desires improvement, as is any other thing. Hypothesis is quite another matter. The one lays down reasons from known premises, deduced from facts. The other assumes premises, and is too prone to be a dreamer.

The lamented Willis Gaylord, was one of the most cogent and able writers we have ever had, yet he was unable to practice the theories he had deduced from his early labors, which were even then limited from bodily infirmity.

I have been a tolerably close observer of men and things, and I think I should not err, if I said—as a *rule* laboring men are not in the main good at directing, nor are money-making men good managers. The first follows too much a routine taught him; the other has no other idea but saving. The first fears to try an improvement he never tested, a course of cultivation he never tried, a seed he never used, lest he might not do as well. The other will not lay out a dollar that he does not see the immediate return of. There are exceptions I admit, and when we meet the enlightened mind, then we should hold on to and encourage. But the idea as thrown out by one writer in an Agricultural paper, that money-making men, are the men who improve land and stock, keep up fences and buildings, and in short do every thing well—is a vain hypothesis. Let us go into any neighborhood, and we shall find men who are accumulating property, who wear out land, and live without much expense. Large crop makers, work at a heavy outlay of something, and the man who makes large crops has not the time to rebuild, or improve land.

Most men that have accumulated large estates, can not tell how they have grown rich—and other men who make large crops, cannot see why every body can not do so. The fact is, there are "vessels made to honor, and others to dishonor;" some men with one faculty and others with another; to make money comes as easy to some men, as the eternal waste comes to others. Let us hear from all, and though we may have to pick over a bushel of chaff to get a grain of wheat, yet we may be benefitted thereby.

I do not like this way of ruling off the track, all that have not the Flying Childers or the Eclipse blood in their veins; if agricultural readers only want to hear how they can make dollars, let them call up the misers from their dens, who can but tell them how many grains of corn will do to support life; and as they pay for the printing they have a right to control. As for me, this eternal weighing and measuring with a dime, I am sick of. I love dimes, but I do not want to eat them, nor to sleep on them, nor to measure a man's honor, nor his worth, nor his ability to advise me, by the length, breadth, weight or worth of his purse.

If I wanted legal counsel, I would not ask whether Daniel Webster was wealthy; if I wanted medical advice, I would not ask whether Valentine Mott could make pills fast. No, sir, I would ask—are they fully, sufficiently, entirely competent in their professions?

Why should not the principle prevail in agriculture? Why should not Dr. Daniel Lee be just as able to instruct in the best mode to conduct an estate, as any Jonas Smallbones in the land, though he might be born between the plow-handles? The instructor must have the faculty of communicating his views, and should by all means be thoroughly conversant with his subject—then, it matters not whether he be a doctor or a plowman.

There are many who are too much bound to their own views to examine others, or to give them a trial. Much of this natural (I may say) disposition is broken down by mixing with our neighbors—by education—yet it will hold to oneself in spite of him.

I consider myself a practical man, yet I have not hoed a row of corn or cotton in many years, nor turned a furrow, yet I am not considered practical by the majority, because I had the blessed advantage of having had a father who sent me to school and made me study.

I cannot accumulate property, nor do I have that sort of a desire: I see so many things I want, that I spend my dollars before I get them to jingle. Though I am not anxious to write for the press, and will gladly quit, whenever I see such a desire exhibited by even a tithe of the readers, I have vainly thought that, though I have sheep-skins enough to permit me to use the M. D. I might be of service to my fellows; if in error, I assure you and all others that I erred in judgment, not from any vanity. M. W. Philips. *Edwards, Miss., June* 10, 1818.

Time for Cutting Hay.

As the season has arrived for cutting hay, and as there is much difference of opinion in relation to the proper time for cutting it, I will just mention the course taken by one man in this mountain town. The man to whom I allude, is John Pratt, and he has managed a dairy of sixty cows for nine years; and in all that time he has not had a cow that has had the least trouble in calving, or cleaning, (as he told me himself) which I think something remarkable. Mr. Pratt's course is, to commence cutting his hay very early, generally before any body else thinks of it, or as soon as it begins to blossom; and he gets help enough to cut all his hay before it gets very ripe, and is generally one of the first to finish haying. He attributes his success with his cows, to *early-cut* hay, together with *careful attention* through the winter; and the rest of his stock corresponds in appearance with his cows. E. L. H. *Shrewsbury, Vt. July* 10, 1848.

Importance of Cutting Roots for Domestic Animals.—1. To avoid choking in the case of cows. 2. To secure better digestion of the food, and of course the better health and improvement of the animals, and the more economical use of food. 3. To save the teeth of the animals, more particularly the horse. This animal often refuses to eat roots, after having taken them freely for a few weeks, entirely, as I suppose, because his teeth have become sore. By frequently biting into roots of two or three inches in diameter, the gums become chafed, and the animal refuses to eat the roots.

Root Cutting Machines—A Cheap Substitute. I never felt the need of a machine of this kind although I have fed roots freely for many years. I use a box with a hard wood plank bottom. The size depends on the amount of stock to be fed. In such a box I crush them with a square headed mallet. Here are no knives to get dull or be broken by a stone among the roots. This box may be kept in your cellar in cold weather. All sorts of animals eat roots thus prepared more easily than when sliced in a machine; since by being left in grains by the mallet, and these grains often cohering, the animal can the more readily seize them than when cut by a machie.

Carrots *vs.* Oats for Horses.—I have worked a horse all winter long on *carrots* and *hay*, with better health, with equal effectiveness and with less expense than on *hay* and *oats*. All horses will not eat them readily at first, especially if mashed fine with a mallet. But all will soon learn; then they are never clogged by them. I think parsneps are equally good; certainly they are equally acceptable to the horse. I leave it to chemists to ascertain the relative proportions of starch and sugar, of phosphates and of nitrogenous matter in each. Carrots are the best root we have for late spring feeding, as they keep better than turneps and most other roots on the approach of hot weather.—With good hay and carrots the horse will hardly feel the want of fresh grass. C. E. G.

Structure of the Horse.—Sir Charles Bell ob- observes that of all creatures the horse has the smallest stomach, relatively to its physical size. Had he possessed the quadruple ruminating stomach of the ox, he would not have been, at all times, ready for exertion; the traveller could not have baited his steed and resumed his journey. The stomach of the horse is not so capacious, even when distended, as to impede his wind and speed; and the food is passing onward, with a greater degree of regularity than in any other animal. A proof of this is that the horse has no gall-bladder.

Answers to Inquiries.

Osage Orange.—D. B. W., Mendham, N. Y.—The seeds of this plant may be first scalded by putting them in water near the boiling point, where they may remain till the water is cool, and then plant them in beds of good soil. Most of the seeds will vegetate the first season. The plants may be transplanted from the seed bed the second season, and may be set in a hedge form at the distance of a foot apart. They should be kept clean from weeds, and in the fall headed down to within two or three inches of the ground, and the growth of the next season cut to within fifteen or eighteen inches of the ground.

Eagle Plow.—G. B., Montgomery Co., Va. The Eagle plow is well adapted to strong soil; but our acquaintance with the Livingston county plow, is not such as qualifies us to say whether the former would be preferable for *all soils*. We should have no hesitation in recommending the Eagle No. 2 for "very strong lands."

Madder.—A. V. L., Newcastle, Del. Madder roots can probably be obtained in the fall from Mr. J. Eaton, of West-Winfield, Herkimer county. N. Y.—For his account of the cultivation of this plant, see Cultivator for 1847, p. 55.

Rose-bug.—"Fairfield County, Ct."—Where these insects infest small plants or shrubs, they may be shaken into vessels of water, and afterwards killed.—Where they attack large trees, as the apple or cherry, or grape-vines, they are more difficult to manage. R. Newton, of Worcester, Mass., states in the *Horticulturist*, that he had effectually driven them from his trees, where they appeared in great numbers, by scattering dry wood ashes among them, with a transplanting trowel or a shingle paddle. Turning up the ground under the trees or shrubs where they have appeared, with the plow or spade, late in the fall, will expose many of the insects to the frost and air, while they are in the larva state, and they will be destroyed. The eggs are deposited from two to four inches in the ground, and the insect passes the three first stages of its existence below the surface.

Quinsey or Sore Throat in Swine.—N. W. B., Nashville, N. C. It is not easy to determine what the cause of this disease is, in all cases. Allowing hogs to eat acorns of the black and red oaks, is thought to produce it sometimes. Physic the animal with salts and molasses—two ounces of salts with two table-spoon fulls of molasses for a dose. Or give a mixture of sulphur, charcoal, and wood-ashes, allowing the animal to eat the mixture at will. The salts and molasses, diluted with water, can be forced down the throat with a syringe.

Washing Machine.—J. F. L., Macon county, Mo. There have been a vast number of washing machines invented, but far the greater portion are known only among the things that *were*, and of those that exist, there are few of any real utility. We are not sufficiently acquainted with the different kinds, to say which is best. A friend uses one called the "steam rotary washing machine," which appears to be quite effective, and does not wear the clothes—price $15. But we should be glad to learn from those who have had *actual experience* in the business, what machines are best on the score of utility and cheapness.

Multicole Rye.—In answer to several inquiries, we will say that a supply of this grain will be kept for sale by Mr. Emery at the Albany Agricultural Warehouse. We believe the variety sustains its reputation for productiveness.

Water in Barn-Yards.—"A Subscriber." There is no difficulty in bringing the water from a spring 30 feet higher than your yard, though there may be a valley between, ten feet lower than the yard, provided the water is confined in a pipe. The water would run by simply placing the pipe in the spring, but to insure its always being kept full, it would be better to raise a head by a cistern or vat. Pipe of three-fourths of an inch bore would be large enough to carry water for twenty head of cattle, or more, and lead-pipe would cost here from twelve to fifteen cents per foot.

Seeds of Thorns.—P. P. P., Bradford Co., Pa.—The seeds of thorns generally vegetate well, if they are well ripened. They are, however, slow in sprouting, on account of the hard shells in which they are enveloped. On this account it is common to scald the seeds by pouring boiling water on them just before they are planted. This causes them to vegetate much quicker than they would do if put in the ground dry. If planted without any preparation, they will not all come up before the following spring, that is, they will lie in the ground a year.

Clod Crusher.—C. S. W., Dutchess Co., N. Y.—We cannot say whether such an implement is made in this country. Mr, D. T. Burrall, of Geneva, N. Y., proposed some time since to make one on the plan of Crosskill's—the one noticed in the English papers—but we have never learned whether he has done so. We think it would prove a very useful implement on compact soils.

White Daisy, or "White Weed."—(*Chrysanthemum leucanthemum.*) J. B. Watertown, N. Y. Where there are but few plants of this kind, it is best to dig them up, root and branch. If meadows are overrun with them, prevent their seeding by mowing as soon as the blossoms appear. In tillage land, kill them as you would any other bad weed, and if they are very numerous, it is advisable to keep the ground in hoed crops for two or three years, during which, if due attention is paid, they may be nearly exterminated. At all events prevent their seeding, as it is from seed only they are propagated. If mowed green and well cured they make hay that is not disliked by cattle and horses. If they ripen, the seed falls to the earth and vegetates, or goes with the hay to the barn or stack, gets into the manure and is returned to the land. It is in this careless way that the pest is continually renewed and increased. Top-dressing meadows with manure that contains no foul seed, and in every way encouraging the growth of grasses and white clover, will, with the above precaution, drive out the daisy in a few years.

The Locust.—A correspondent in Chester county, Pa., asks whether any new light has appeared in regard to the natural history of the locust. The insect called by that name in this country is not a locust—the real locust being a very different insect, closely allied to the grasshopper—both being included by Linnæus in the genus *gryllus*. What is improperly called locust in America, belongs to the group *cicada*, its specific name being *septendecim*, from its period of life being seventeen years. In its character and habits it differs widely from the true locust. Except for a few weeks at the latter end of its existence, the cicada lives entirely under-ground, feeding on the roots of trees and plants. During the short time it appears on the surface of the earth, it eats nothing, and it does no damage to vegetation while in the perfect or winged state, except in furrowing the limbs of trees to form cavites in which to deposit its eggs. As soon as the eggs hatch, the insects leave the trees and pass into the earth, groping in darkness for the long period mentioned.

The locust (or grasshopper) lives but a single season—not *in* the ground but on the surface or in the air, and its ravages are committed on the *tops* (not on the roots) of plants. The dreadful havoc which has been produced at various periods by the locust, in some districts of the Old Continent, has given rise to considerable alarm in this country—the cicada above described being confounded with the true locust. But those devastations were produced by some of the grasshopper family. We have several species in this country which Dr. **Harris** calls locusts. What is commonly called the red-legged grasshopper, he calls the red-legged locust. It prevails extensively and is often very destructive to vegetation.

It is a well known fact that the *Cicada septendecim*, appears in different places in different years, though it is only seen on the same spot or in the same neighborhood, once in seventeen years. The fact is of great interest to naturalists, and we are pleased to see that it is attracting considerable attention.

Diseases of Animals.

Heaves in Horses.—I have been acquainted with this disease practically for many years. I think it can never be cured, nor much alleviated by medicines. I am assured, on what I consider good authority, that removal to western Ohio is a certain remedy. I once drove a heavy horse twenty years old, through a journey, going and coming, of eleven hundred miles, in the months of May, June, August and September. The whole was accomplished with fair speed, and a good degree of comfort to man and beast, by the observance of one short and simple rule. *Avoid dust*. The manger and rack were usually dusted, the hay shook and sometimes watered, and the oats wet before the horse was allowed to approach them. "A good deal of trouble," says one. "Yes," I answer, "and a good deal of comfort, too, both to horse and traveller." The worst predicament was in travelling a dusty road with a light breeze blowing in the direction of the journey. Then the poor creature suffered, of course. C. E. G.

Red-water in Cows.—We are informed by the Danville (Va.) Register, that not less than 300 cows have died in that vicinity, from the disease called red-water. It is a malady we have never met with, and we are not prepared, from our personal knowledge to "throw any light upon it." According to veterinary works there are two kinds of red-water—acute and chronic. *Cole's Veterinarian* describes the latter, (which is probably the kind above alluded to,) as follows:

This is most common in cows of weak constitutions, and in calves. In the first stages, it is far more a disease of the digestive organs than of the kidneys. The following causes are assigned: relaxed vessels; thin blood; cold; change from poor to rich pasture; luxurious pasture for cows recently dried, and scarcity of water in a long, dry summer. Some of these are only secondary causes, and there are doubtless various other primary causes, among which is the want of exercise.

Symptoms. The urine is of a brown color, or brown tinged with yellow. The beast feeds nearly as well as before, but ruminates more lazily. In a few days a natural diarrhœa comes on, and then the animal is well again; or a purgative is given and a cure is soon effected.

At other times the animal is dull, heavy and languid; the ears droop, the back is bowed, she separates from the herd, refuses food and ceases to ruminate. Again she is better, and then suddenly changes to worse; the urine assumes a dark color, resembling foul coffee or porter; it increases, in quantity, and is sometimes discharged with difficulty and in little jets. The milk diminishes, and acquires a tinge of yellow or brown, and the taste is unpleasant. The pulse is accelerated to sixty or seventy beats a minute. The skin is yellow, but of a darker yellow than in jaundice; it has a tinge of brown. The urine becomes of a darker hue, and is almost black. Sometimes the animal shrinks when the loins are pressed, but not usually, nor so much as in acute red-water. There is a loss of condition and general debility, and the legs and ears are cold. In every stage there is costiveness very difficult to remove, yet generally there was violent diarrhœa at the begining, which suddenly stopped. The dark color of the urine is caused by vitiated bile, not by blood, as in acute red-water.

An examination, after death, shows that the contents of the *manyplus*, or third stomach, are perfectly dry and almost as hard as though they had been baked.—This is doubtless the disorder which many farmers call *dry belly-ache*; and some call it dry murrain. The liver is inflamed, and darker than usual; the gall-bladder is full to distention, and the bile is thick and black. These circumstances show that the seat of the disease is in the liver, and that the gall is obstructed in its passage to the intestines; and indigestion is the result.

Remedy. As in this disease constipation of the bowels is generally obstinate, back-rake, and give an exciting injection; then give a good dose of physic, with ginger, or other stimulant, and if there be no operation in six or eight hours, repeat, in half doses, and continue mild injections occasionally, until an operation of the physic. Give also warming teas, such as sage, peppermint, &c. Feed on laxative food, and give astringents, as for jaundice, to restore the digestive organs to their usual tone and action. We think that ashes and cider would be excellent. Saltpetre, in doses of an ounce, is good. Change the food, and remove all cause of disease. Small doses of sulphur are good.

Black-leg in Calves.—At a recent discussion of this subject by a Farmers' Club in England, it appeared to be the general opinion that hay which was badly heated in the mow or stack, rendered calves which fed on it particularly liable to black-leg. It was agreed that they should not be stunted in their growth—should have clean, sweet fodder (or grass) with a little meal of some kind of grain, or oil-cake, and potatoes, turneps or carrots.

New-York State Ag. Society.

The Executive Committee met at Buffalo June 22d. They selected the ground and made other preparations for the Society's Show and Fair, to be held at that place on the 5th, 6th, and 7th of September next. *Superintendents* have been appointed to take charge of the different divisions of the show. It is expected they will be on the ground and will give proper directions in regard to placing and arranging the various articles and animals. This course will prevent confusion, and greatly simplify and facilitate the operations of the society.

A pamphlet containing the list of premiums, together with the names of the adjudging committees, and all the accompanying regulations, has been published, and may be had (gratis) on application to the Secretary, at the Society's room, Albany.

We are pleased to see that the people of Buffalo and the western portion of the state, manifest a praiseworthy spirit in advancing the objects of the Society. We confidently expect a superior display of the products of our own state; and owing to the favorable position of Buffalo for being reached from the Western States which border on the lakes, and also from the Canadas, we presume there will be a large turn-out of "men and things" from those sections; and in every aspect, we anticipate an exhibition creditable to the Society and the people contributing to it.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from A. V. L., D. B. Williams, A. C. Richard, Fairfield County, A. B., W. Bacon, Edward Clark, James Flore, A Subscriber, Dr. Charles Hamilton, W. N. Green, L. L. H., M. W. Philips, C. S. W., S. Smith, J. B., H. Grath, Jr., A. B.

Books, Pamphlets, &c., have been received, during the past month as follows: "Patent Office Report for 1847," and "Speech of Hon. J. I. Slingerland, on Internal Improvement, the War, and Land Monopoly," from Hon. Mr. Slingerland.—"Transactions of the Mass. Ag. Societies for 1847," from J. W. Lincoln, Esq.

School of Applied Chemistry.—We would call particular attention to the advertisment of the school under the charge of Profs. Silliman and Norton, at New Haven. The agricultural department is under the direction of Prof. Norton, who has been favorably known to the readers of the Cultivator for several years, and who, we are confident, has, by his writings, secured the approbation of the thinking, practical portion of the farming community. The school has been in operation for nearly a year, and we have heard it spoken of in terms of high commendation by those who are competent to judge of its character. It will be seen that Profs. S. and N. will undertake such analyses and investigations as may be entrusted to them.

Fine Raspberries.—We have received from Chauncey Copley, agent for the Society of Shakers, at Watervliet, some beautiful samples of the Fastolff, Antwert, Ohio ever-bearing, and Ohio yellow raspberries. They are all very fine kinds, and decidedly the best specimens we have seen this season. The Society is paying much attention to the culture of fruit, and will have the stocks of the kinds mentioned for sale this fall or next spring—together with the best varieties of the strawberry.

Walcheren Cauliflower.—We have recived from Mr. James Wilson of this city, a couple of very fine heads of this superior variety of cauliflower. It has lately been introduced here from Germany. There are two kinds—the early and late. That received from Mr. W. was the former. The seed was sown in the Green House, in March, and the plants set in the garden as soon as the state of the ground would permit. The heads were cut on the 30th of June—were very close and full, and of a quality and flavor unsurpassed. We have no doubt the variety will prove an acquisition to our list of culinary vegetables. In the *Horticulturist*, vol. ii, p. 463, Mr. Downing has very favorably noticed both the early and the late Walcheren cauliflower.

A good Horse.—A correspondent writes—"You remember my old bay horse. The other day I drove him a mile on the trot before a buggy with three men in it, fairly within four minutes, a measured mile. He is *seventeen* years old—is perfectly sound, and has done a hard spring's work at the plow. He was fat on grass, never had a mile of training—having been taken out of the pasture the night before. It was after having driven him seven miles, that I drove him between the seventh and eighth mile stones in the time mentioned."

Yield of Butter.—In the year 1844, six cows belonging to George Vail, Esq., of Troy, produced in thirty days, 262 lbs. 9 oz. of butter—averaging 43 lbs. 12 oz. for each cow. The same year Philip Van Benscoten, of La Grange, Dutchess county, produced in thirty days, from five cows, 227 lbs. of butter, averaging 45 lbs. 6 oz. for each cow.

Farmers' Club.—We are informed by Charles Betts, that a Farmers' Club has been formed in the vicinity of Redford, Mich., in which the farmers manifest a deep interest, and which has already been the means of awakening a spirit of improvement that cannot fail of being useful.

Wheat and Rye in Virginia.—M. Davis, Esq., of Lynchburg, Va., writes—"We have just cut a good crop of wheat—the best we have had in this region for several years. Rye was once thought the surest crop we could put in the ground; but for a number of years it has failed to such a degree that few persons sow it, and nobody seems to be able to tell the cause of the failure."

Foreign Wool Trade.—We have accounts from the great Breslau wool fair of June 9th. The whole quantity of wool offered was 59,000 cwt., 20,000 cwt, of which remained unsold at the close of the fair. The prices were considerably below those of last year. The best selected lots of Silesian (or Saxon) wool brought from 90 to 110 dollars per cwt.; the "fine" 60 to 68; the "middle fine," 50 to 55; and the "low" 26 to 30. The fleeces were prepared in the best condition.

Wool Trade.—The *British Farmers' Magazine*, speaking of the supplies of wool from the Western states, says, "Until they are got up with more care, better washed, and more evenly graded, we see little prospect of a profitable result."

Crops in Ohio.—The *Ohio Cultivator* states that the wheat crop of that state is remarkably fine. Corn was, (on the first of July) backward. Grass not generally heavy—but pretty good. Potatoes promise a healthy crop—"especially where planted early." Fruit generally abundant. In the Western Reserve, the *rose-bugs* have injured the fruit trees very much.

Steam *vs.* Horse-power.—A gentleman has challenged the Great Western Railway Company to match a horse against a steam engine for half a mile—the engine to travel on the rail, the horse on the Reading race course parallel to the railroad. Speculation runs high on the issue. The editor of the *Mark Lane Express* offers to back the horse.

Turnip Meal.—A kind of meal made from turnips has been introduced in Scotland. It is made by passing Swedish turneps through a potato starch mill. After having been passed through the washing machine, they are ground down by the rasping apparatus, and the pulp is passed between rollers which squeeze out the greater part of the moisture. The squeezed fibre is then dried on a kiln and ground into meal by mill stones. The liquid which is expressed is evaporated, and the dry solid part is mixed with the meal. The meal therefore contains nearly all the solid parts of the turnip in a state which prevents decay, and in a light and portable form. It is confidently expected that this article will prove a good substitute for grain to feeding stock in that country. Prof. Johnston, on analysing it, found it to contain 13.68 per cent. of protein compounds, 48.72 of sugar, 4.14 of gum, and 1-11 per cent. of oil.

Saline food for animals.—The tissues of the body contain various saline principles, as soda, iron, sulphur, phosphorus, lime, &c. They are derived from the food and drink. The bones are formed in a great degree of phosphate of lime, and it is of the greatest importance that young animals, in particular, should be supplied with food capable of yielding this substance in proportion to the regularly increasing demand of the system. *Milk* is in this respect a perfect food, and may be said to be the most proper substance, that can be given. The effect of not duly supplying animals with their suitable food, may have been seen in pigs which were kept in pens, not allowed to come to the ground, and fed with weak slops and vegetables. Their bones are frequently weak, as is shown by their crooked legs, which are unable to support the body. Give them milk, and allow them an opportunity to take proper exercise, and they will speedily improve—the bones becoming firm and strong.

Soiling.—Sir John Sinclair in his "Husbandry of Scotland," remarks that "Milch cows give more milk when soiled than when pastured, provided due attention is bestowed in furnishing them with a regular supply of grass at stated periods—say six times each day—and keeping them clean and free from nastiness."

Cost of Fences.—Nicholas Biddle once remarked that the cost of fencing alone in the state of Pennsylvania, would pay the state debt, about forty million dollars.

A Rochester Mill in Spain.—John Eggleston, of Rochester, has furnished a model mill, to be copied in the erection of a flouring mill at Bilboa, in Spain.

Windham County, Vermont.—Next fair of the Agricultural Society will be held at Fayettville, on the 5th and 6th days of October next. The officers of this society are, Daniel Kellogg, President; Chas. Chapin, Emory Wheelock, Vice Presidents; Chas. K. Field, Treasurer; John Tufts, of Wardsboro, Secretary. A very judicious premium list has been published, and we presume the exhibition will be creditable to the intelligent citizens of the section.

Turneps *vs.* Potatoes.—Boussingault, in his work on Rural Economy, tells us in his "Elements of Crops," that the Turnep is the most watery root he has examined, and that by desiccation he found out of one hundred parts of fresh turnep, ninety-two and a half parts were water; whilst by a similar process he found that from one hundred parts of fresh potato only 76 parts were water. The elementary constituents of the two kinds of vegetables were very similar: according to these analyses of Boussingault's you will perceive that, weight for weight, the "raw" potato exceeds more than three times the nutritious properties of the turnep—or, in plain figures, 3.2 times.

Chemistry and Agriculture.—Within the last year or two, we have seen frequent notices of the investigations of Kuhlman, of Paris, in relation to the connexion of chemistry with agriculture. A volume has lately been published embracing the results of his researches on the subject. This we have not seen, but from a review of the work which we find in the Scottish Quarterly Journal of Agriculture, we learn that the leading object of the author was to ascertain facts in regard to the operation of substances used as manures. For this purpose he instituted a series of experiments with many different articles. The trials appear to have been fairly conducted, and with a sole view to the elicitation of truth. Some of the conclusions to which his results have tended are as follows:

That the value of manures may be ascertained by the quantity of azote or ammonia they contain: that the phosphates did not produce the same invigorating or stimulating effect as the azotised manures, though their action was more lasting than the latter: that there seems to be a limit to the beneficial action of ammonia, as a superabundant application actually decreases the produce.

The reviewer observes:—"Unlike many agricultural writers of the day, Kuhlman has drawn all his conclusions from experiment; he has not, like them, *commenced with his theory*, and twisted all his results to make them agree with the preconceived opinion. On the contrary the experiments are fairly tried: and the deductions so modestly drawn, that every reader must feel himself compelled to agree with them, notwithstanding they differ from the expressed opinion, that plants derive all their azote from the air. Against *this opinion* we may place the conclusion at which Kuhlman has arrived, from careful and laborious experiments, namely,—'That if the air can supply sufficient azote for vegetation, *we can double that vegetation by the addition of azote to the soil.*'"

The Wheat Crop at the West.—The *Prairie Farmer* of July, says—"The present prospect for the wheat crop, and indeed for all other crops, has not been better since the settlement of the northwestern country. Notwithstanding the ravages of the Hessian fly in the fall, and the damage done by the winter, there bids fair to be a tolerable crop of winter wheat, even in the most unfortunate districts; while in those not affected by these visitations, the present promise was never better. The proportion of good weather has been so large that fields which seemed past hope in the early spring, now promise a fair yield. Contrary to our expectations, the Hessian fly has hardly been heard of this spring. We looked for his disappearance after the present season, but did not anticipate exemption quite so soon. The prospects of the wheat crop, in the southern belt of the northwest, including a strip say three hundred miles wide, lying north of the south end of this State, has not been otherwise than good. Its present keeps pace with its past promises. The northern belt, extending from the southern extremity of Lake Michigan to the northern limit of Wisconsin, suffered more or less in the fall and winter, from the causes alluded to. Within this belt, spring wheat not only makes up for whatever deficiency there might be in the winter crop; but from past failures, has become a vast crop of itself. Perhaps so much of this was never before put in as the present season. Taking altogether, the dark shades are few and unimportant. Still there are many risks yet to be run. Through the State of Ohio, also, the crops never gave better promise. The corn crop is, if possible, fairer than the wheat, with us: and according to present indications, will be much larger than ever before May there be no disappointment.

A Cold Well.—A letter was lately read before the Natural History Department of the Brooklyn Institute, describing a singular phenomenon connected with what is called "the deep well," near the village of Owego, N. Y. It is seventy-seven feet deep to the surface of the water, and was excavated twenty-five years ago. Two years after it was dug, the water became frozen in the winter, and it has been frozen every severe winter since. Two years ago a lump of ice was drawn out of the well in July. In the month of June last there was only two feet of water, and its temperature was 40°

Californian Horses.—We have seen it stated that Com Stockton has taken measures to introduce to the United States, some of the breed of horses called *cunalos*, with which Col. Fremont performed his wonderful feats in travelling, noticed in a previous number.

Farm of the Kings County Alms House.—Attached to the Alms-House is a farm of 113 acres, 70 of which is the property of the County; the additional 43 acres have been leased for a term of 7 years, at $6 per acre, by the Superintendents. The products of the farm during the last year were as follows: Wheat, 190 bushels; Oats, 360 bushels; Corn, 1,100 bushels; Potatoes, 1,100 bushels; Beets, 390 bushels; Turneps, 400 bushels; Onions 150 bushels; Flax, 300 lbs; Cabbages, 3,500 heads; Celery, 2,000 heads; and a large supply of garden vegetables. Pork, 4,205 lbs; Calves, 5 head. There was harvested also 86 loads of Hay and 20 acres of Wheat. There was made in the house, for the use of the inmates during the year, garment pieces No. 3,214; Stockings Knit, 624 pair; Shoes made, 91 pair; Shoes repaired, 118 pair; Thread spun, 30 lbs; Coffins made, 114; Iron Bedsteads for Asylum and Hospital, 43. The amount of stock on the farm on the 31st July, 1847, was—8 horses, 8 cows, 2 oxen, 1 bull, 62 swine, 200 poultry. During the year there were 32 births, and 111 deaths. The number of persons supported for the year was 7,185; number temporarily relieved, 5,955.—*Tribune.*

Notices of New Publications.

TRANSACTIONS OF THE NEW-YORK STATE AGRICULTURAL SOCIETY FOR 1847.

This is a volume of about eight hundred pages, comprising full details of the ordinary doings of the Society for the last year, together with Reports from most of the County Societies in the State. It contains also many valuable papers communicated to the Society; among which are two from Prof. JOHNSTON, of Durham, (Eng.) one on the use of Bones as a Manure, and the other on the Composition of a Water found very useful in Irrigation; an article on the Currant Moth, illustrated with a very handsome steel-plate engraving, by Dr. A. FITCH; Agricultural Schools, by S. LUCKEY, D. D.; Subsoil Plowing, by JOHN MALLORY; the Potato Disease, by Rev. C. E. GOODRICH; Silk Culture in America, by Dr STEBBINS, &c. The volume contains a great amount of really valuable matter. We have already given abstracts of some of the articles, and shall notice others.

VERMONT STATE AGRICUTURIST.—We have received the first number of a publication with this title issued at Burlington, Vt. As the name implies, it is to be devoted to the interest of agriculture, and for this purpose it will seek to collect and disseminate information of a practical and scientific character. It is announced that the services of Professor PHELPS, of Windsor, have been secured for the departments of Chemistry and Physiology, and those of Professor TORREY, of the University of Vermont, for the Botanical department. It is to be published monthly by CASPAR T. HOPKINS and D. W. C. CLARKE, the former of whom has the editorial charge of the work. We trust it will prove a useful aid in the good cause which it advocates. It is a quarto of sixteen pages—terms $1 a year.

AMERICAN JOURNAL OF SCIENCE AND ARTS.—The number of this work for July is received. As usual, it is filled with valuable matter relating to subjects belonging to its appropriate sphere. We notice an interesting article on the variations of the level of lake Superior, by Prof. W. W. MATHER; the Orbits of the Asteroids, by B. A. GOULD; the Benificent Distribution of the Sense of Pain, by G. R. ROWELL, &c. Published at New Haven on the first day of every second month, at $5 per year. Edited by Messrs. SILLIMAN and DANA.

THE FARMERS' LIBRARY.—We learn from the June number of this work, that its title is to be changed to that of "THE PLOW, THE LOOM, AND THE ANVIL."—Mr. SKINNER, the able editor, has purchased the establishment, and has made arrangements with ZIEBER & Co., of Philadelphia, for its future publication. We do not understand that the plan of the work is to be essentially altered, except that it will more especially advocate a "cordial alliance and mutual support among all the great branches of American Industry." It is to be published monthly, at three dollars a year. We wish it success.

THE PLOW, THE LOOM, AND THE ANVIL.—Since the above has been written, we have received the first number of this work. It contains seventy-two pages, octavo, well filled with valuable matter. The principal portion relates to agriculture and various branches of manufactures, and to the relation they sustain to each other; but there are several pages of useful information under the heads "Miscellaneous Scraps," "Readings for Mothers and Children," &c. The work is neatly printed and in all respects makes an attractive appearance. Edited by J. S. SKINNER & SON, and published by G. B. ZIEBER &Co., Philadelphia.

Domestic Economy, Recipes, &c.

To make good yeast in summer, is a desirable object with every housewife. She may have such by the following simple process:

Boil a single handful of hops (which every farmer ought to raise, to the extent of household wants,) in two or three quarts of water—strain and thicken the liquor, when hot, with rye flour; then add two or three small yeast or turnpike cakes, to set the mass. If this is done at evening, it will be fit for use early next morning. Reserve a pint of this yeast, which thicken with Indian meal, make into small cakes, the size of crackers, and dry them in the shade, for future use. In this way the yeast is always fresh and active. Yeast cakes kept a long time are apt to become rancid, and lose their virtues. The fresher the cakes the better the yeast.

To make Currant Jelly.—Take the juice of red currants and white sugar, in equal weights. Stir it gently and smoothly for three hours, put it into glasses, and in three days it will concrete into a firm jelly.

GREASE FOR MACHINERY.—Oil, sulphur, and vulcanized caoutchoc, in composition, is said to be superior to any thing known.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, July 15, 1848.

FLOUR—Genesee per bbl. $5.25—Georgetown $6.

GRAIN.—Wheat, southern, per bu., $1 21—Ohio $1.12—Corn, northern, 53a54c.—Rye, 68c.—Barley 60a65c.—Oats, 42a43c.

BUTTER—Orange County, per lb., 16a18c.—Western, dairy, 14a16 c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $11.50a$12.00—Prime $6 12½a $6.50.

PORK—Mess, per bbl., (new,) $17.50—Prime, $8.12½a$9.12½.

HAMS—Smoked Western, per lb., 5½a9c.

LARD—in kegs, per lb., 7a7¾c.

HEMP—Russia clean, per ton, 225a$230.—American dew-rotted. $130a$135.

HOPS—First sort, per lb., 4½a5c.

COTTON—Upland and Florida, per lb., 5a7½c.—New Orleans and Alabama, 5a8½c.

WOOL—(Boston prices.) July 15.

Prime or Saxon fleeces, washed per lb........	42a45	cts.
American full blood fleeces,..................	38a40	"
" half blood do	30a32	"
" one-fourth blood and common,.....	28a29	"

☞ There is no foreign demand for flour, and but little for Indian corn or meal. Foreign accounts represent the prospect for grain crops as favorable. The potato disease had not appeared in the growing crop, which was promising. In the south of England new potatoes had been brought to market, and were selling at moderate prices. The wool trade in Europe is rather depressed, but considerable purchases were made by the English manufacturers at the late Continental fairs, and a revival of business in this line was anticipated. The wheat crop in this country is generally abundant.

WHEELER'S PATENT HORSE POWER AND THRESHER.

THE above machines having attained a wide introduction among all classes of Farmers and Mechanics, and having without exception, given the fullest satisfaction, we do not hesitate to recommend and warrant them to any and all wishing such machinery—For prices, particular recommendations, &c., see the Albany Cultivator for February, 1847 and 1848, also for May, 1848. Also Catalogue, gratis, at Store, Nos. 10 and 12 Green st., Albany, or by mail.

HORACE L. EMERY
General agent for the manufacturer, wholesale and retail.

JOHN MAYHER & CO.,

UNITED States Agricultural Warehouse, No. 195 Front one door South of Fulton Street, N. York City.

Where they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New-York, which will be sold at lower prices than they can be purchased at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayer & Co.'s celebrated and unequalled First Premium Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, August 1, 1848.—tf.

EAGLE PLOWS.

NO Plow has been so long before the public with so few alterations, come into so general use, or received so many and so high grade premiums, as the genuine Eagle Plow, made by the inventors, Messrs. Ruggles, Nourse & Mason.

Notwithstanding the great diversity of soils, modes of culture, and the constantly increasing competition, and being subjected to the most thorough and persevering trials ever had in this country, the Eagle Plow still stands at the head of the list for excellence of work, materials, durability, workmanship, ease of draft, and price.

Some of its merits over other kinds in use, are that the metal is of such a mixture of irons as gives them strength equal to malleable iron and admits of the chilling process on all the wearing parts, which causes them to wear sharp, and do three to five times the amount of work, as the ordinary kind of plow casting—while the risk of breaking is not increased by the process.

All sizes of the above plows constantly on hand at wholesale and retail, at manufacturer's prices, at the Albany Agricultural Warehouse. Nos. 10 and 12 Green St, Albany. All plows warranted.

For prices description, &c., see Catalogue, gratis at Store or by mail. H. L. EMERY.

GREATEST IMPROVEMENT OF THE AGE.

Smith's Lever Drill.

Patented November 4, 1846, to H. W. SMITH.

THE advantages of this machine as fully established by use and experiment, are

1.—A saving of from two to three pecks of seed per acre.

2.—An equal distribution of any given quantity of seed, covered at a uniform depth.

3—A saving of labor; a boy and team, with this machine, can complete from 8 to 10 acres per day; and the surface of the soil is left in such a position that it does not encrust, and undergoes a constant course of natural cultivation by the action of every shower, so that the gases and atmosphere readily penetrate,—hence,

4—The grain is not so liable to be thrown out by frost.

5—It stands firmer and stronger, and is not so liable to be injured by rust or the fly.

6.—Where these machines have been used, the saving of seed and increase of product, amounted to from 20 to 25 per cent.

The great improvement in this machine, over all others of the kind is its simplicity, durability and economy, and the facility and certainty with which it can be *set* or *altered* by a regulated *index* and *guage* to drill or plant any given quantity of grain per acre, at any given depth.

These machines are now being made at Syracuse.

County rights to manufacturers sold on reasonable terms.

For further particulars address the undersigned, post paid at Syracuse. C. MASTEN,

Aug. 1, 1848.—3t.

SALE OF STOCK AT BUFFALO.

I WILL sell at the State Cattle Show in September next, at Buffalo, about 30 thorough bred Short horns, consisting of cows, young bulls, heifers, and calves.

Also, 30 thoroughbred Devons of like description.
Also, 30 " Cotswold Sheep, (long-wooled) ewes & rams.
30 " Southdown Sheep, (middle-wooled) of same sexes.

Catalogues and pedigrees of the stock will be on the show grounds where the animals will be exhibited.

The character of my stock is generally known—and I shall offer it all indiscriminately to the public, making no reservations for my own use.

Black Rock, *June* 13, 1848—2t. LEWIS F. ALLEN.

SCIONS FOR BUDDING,

At low prices,

FOR Sale by J. J. THOMAS, at his nursery in Macedon, including most of the standard varieties of apple, cherry and peach, *all proved by bearing*, at $2 to $5 per 1000 buds, where quantities are taken, and an additional discount on large orders. Several new varieties of fruit furnished in smaller quantities at moderate rates. Bundles packed for sending by express, so as to keep fresh a week. Applicants stating the varieties and quantities wished, will be furnished with distinct prices. All communications to be post-paid, and orders to be accompanied with remittances, or satisfactory references.

Address, J. J. THOMAS, *Macedon*, *Wayne*, *Co.*, *N. Y.*

July 1—2t.

SCHOOL OF APPLIED CHEMISTRY.

Attached to the "Department of Philosophy and the Arts," in Yale College.

B. SILLIMAN, Jr., Professor of Chemistry and the kindred Sciences applied to the Arts.

J. P. NORTON, Professor of Agricultural Chemistry.

THE Instructors in this department have opened a commodious laboratory on the College grounds, where they are now prepared to receive pupils in special and general chemistry. The system pursued with those who design to become chemists or to study the science extensively, is thorough and complete. Such students always commence with an extended course of qualitative examination of unknown substances—and in due time pass through a series of varied quantitative determinations. To those who wish to follow special investigations connected either with the arts, agriculture or pure science, every facility will be afforded, both in organic and inorganic analysis.

Prof. B. SILLIMAN, Jr., will instruct particularly in general elementary and analytical Chemistry, Mineralogy and Metallurgy, with special reference to their application to the useful arts. He will also give a course of lectures on Mineralogy and Mettallurgy, continued through the summer term. During the fall and earlier part of the winter, he will also carry a class through a course of elementary Chemistry, in elucidation of the regular course on this subject in the Academical department.

The instruction in the Professorship of Agricultural Chemistry is intended to unite, as much as possible, practical views with theory; to give the untaught farmer an opportunity to become acquainted with so much of science as shall enable him to reason upon his daily pursuits, and to understand the great principles upon which good cultivation must depend, presented in so plain a form as to be within the comprehension of all. Few chemical terms will be employed in the lectures, and those only of the simple explanations; they will thus be understood by those who have never devoted any attention to the subject. A regular course of lectures will be delivered in the winter of each year, commencing in January and continuing about two months, there being four lectures in each week. The subjects of the course will be—the composition and nature of the soil, the plant, and the animal—theories of rotation of crops, and of feeding—modes of draining—the different kinds of manures, their value and how beneficial—the improvement of waste land, &c. &c. Text-books will be indicated for study during leisure hours.

In connection with the lectures, will be a short course of elementary Chemistry, for such as wish to study somewhat more of chemistry than is given in the course, and to qualify themselves for making ordinary testings and qualitative examinations of soils, manures, &c.; this course will occupy two hours of five days in each week during two months.

The fee for the Lectures on Agricultural Chemistry will be $10. That for the Elementary Chemical Course, including apparatus and reagents, will be $25.

Students in Analytical Chemistry are allowed to work in the laboratory during the whole day; glass will be furnished, (with charges for breakage,) also the ordinary reagents and balances for the use of those who are so far advanced as to require them. There will be frequent recitations, and the students will receive the constant attention of one or both of the Professors. The fee for this class will be $20 per month.

The vacations will correspond with those in the Academical departments, viz:—six weeks from the third Wednesday of August; two weeks from the first Wednesday in January; and four weeks from the third Wednesday in April of each year. Sessions begin with the close of each vacation, and are in length respectively, 14—14 and 12 weeks.

Students in this school will enjoy all the advantages to be derived from the extended means of the Institution in Libraries, Instruments and Collections. The mineralogical and Geological collection is widely known as one of the best in the country, and there are smaller collections in the possession of the Professors. Those who desire it can have access to the Lectures on Chemistry, Mineralogy and Geology, by Prof. B. SILLIMAN, Senior, and to the Lectures on Natural Philosophy, by Prof. D. OLMSTED.

Instruction is also accessible in higher Mathematics, in Engineering and the use of Instruments in Philology, History, Oriental Languages and Belles Lettres.

The department of Philosophy and the Arts in Yale College, of which the School of Applied Chemistry is a part, has been organized with a view to meet the wants of those who desire to follow the studies embraced under it further than they are pursued in a collegiate course. Those who desire further information on this subject are referred to the annual catalogue of the Institution for 1847, '48.

A college education is not however required of those who become students under this department.

The Professors are always accessible to those who wish to consult them on matters relating to their several departments; and will undertake such analyses as may be entrusted to them. Letters of inquiry will be promptly attended to.

Analytical Laboratory, *Yale College*, *New Haven*, *Aug*. 1848.—6t.

ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess, or suffering injury from its use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

THE FARMER'S SONG.

I envy not the mighty king
Upon the splendid throne—
Nor crave his glittering diadem,
Nor wish his power mine own:
For though his wealth and power be great,
And round him thousands bow
In reverence—in my low estate
More solid peace I know.

I envy not the miser—he
May tell his treasure o'er,
May heaps on heaps around him see,
And toil and sigh for more;
I'd scorn his narrow sordid soul,
Rapacious and unjust;
Nor bow beneath the base control
Of empty gilded dust.

Let warriors mount fame's giddy height,
Gain glory's gallant mead—
Be calm, collected in the fight,
Where thousands round him bleed;
I envy not their victor wreath,
Their courage nor their fame;
Their laurels are a fleeting breath,
Their glory but a name.

Selected.

WM. R. PRINCE & CO.,

Sole Proprietors of the Linnæan Gardens and Nurseries, Flushing,

WILL transmit their NEW STRAWBERRY CATALOGUE, comprising every estimable variety, with descriptions, culture and prices, just published, to every post-paid applicant.

The following form a part only. The prices per 1,000 are greatly reduced. H denotes the Hermaphrodite, and P the Pistillate varieties. The varieties thus * designated are not in possession of any other nursery in this town or elsewhere. Strangers will enclose cash with their orders.

	Price pr doz.	pr 100
Scarlet & Pine Strawberries		
Abyssinian Prince, P	$2 00	$8 00
Aberdeen Beehive, H	2 00	8 00
*American Scarlet P	50	2 00
* " Prolific, H	50	2 00
*Bishop's Globe, P	50	2 00
* Seedling, true. P	50	2 00
Bishop's Orange, true		
Black Prince, P	50	2 00
Boston Pine, H......	50	2 00
*Brilliant, H........	2 00	8 00
Burr's Seedling, H..	37	2 00
" Columbus, P ..	60	4 00
" Late Prolific, P	1 25	8 00
" Mammoth, H ..	1 00	6 00
" New Pine, P ..	1 25	[illegible] 00
" Profusion, P ..	1 00	5 00
" Rival Hudson, P	62	4 00
" Sc'rlt Melting, P	1 25	6 00
" Scioto, P......	1 25	8 00
*Charlotte, P........	3 00	0 00
*Chili, H...........	3 00	10 00
*Cluster Hudson, P.	1 00	5 00
*Cornucopia, P......	2 00	10 00
Crimson Cone, P....	75	3 00
* " Pine, H & P	1 50	6 00
Cushing, H.........	50	2 00
Eberlein, H.........	1 50	6 00
*Eustatia, P........	2 00	10 00
*Globose Swainstone		10 00
H	2 00	10 00
Hovey's Seedling, P	37	1 50
Hudson, H & P.....	25	1 50
*Illinois, P.........	50	2 00
Jenney's Seedling, P	50	2 00
*Ladies' Finger, H..	2 00	10 00
Large E'rly Sc'rlt, H	25	1 00
*Le Baron, H	2 00	8 00
Lizzie Randolph, P..	2 00	10 00
*Magnate, P........	3 00	15 00
*Magnifique, P	3 00	15 00

	Price pr doz	pr 100
Methven or Victoria, P	25	1 50
*Monstrous Swainstone, H.........	2 00	10 00
*Primate, H.........	3 00	10 00
*Primordian, P......	2 00	10 00
*Profuse Scarlet, P..	3 00	5 00
*Prolific Hudson, P..	1 00	8 00
* " Swainstone, H	2 00	8 00
*Refulgent, P.......	2 00	8 00
*Round White Carolina, H..........	2 00	8 00
*Serena, H...........	2 50	10 00
*Theresa, H	2 00	8 00
*Tivoli Scarlet,.....	2 50	10 00
*Unique Scarlet, H.	1 00	5 00
Prairie Strawberries		
*Camak's Scarlet, H.	50	2 00
Iowa, H............	50	2 00
Prairie Cluster, P....	50	2 00
Pistillate Keen. of Ohio.		
Taylor's Seedling, P.	50	2 00
Unique Prairie, P ...	50	2 00
Necked Pine, of Ohio		
Willey, P...........	50	2 00
Hautbois Strawberries.		
*Green, H..........	50	2 50
*Large flat H'tbois. H	50	2 50
Prolific Hautbois, H.	37	1 50
Alpine & Wood Strawberries		
*Besancon Alpine, H	75	3 00
Redwood, (English) H	25	1 00
Whitewood, " H	25	1 00
Red Alpine, with runners, H	25	1 00
White Alpine, do H	50	2 00
Red Bush Alpine, no runners, H......	50	2 00
White Bush, do do H	50	2 00
Montevideo Pine.		
*13 Splendid varieties, each $5 per dozen		

Fruit Tree Scions for budding.

WM. R. PRINCE & CO., Flushing, will supply these at the same prices as advertised in the Cultivator and Horticulturist of January last.

Aug 1, 1848.

FARM FOR SALE AT A BARGAIN,

CONTAINING Two hundred and thirteen acres, six miles west of Batavia, Genesee county; one hundred and sixty acres under good improvement; balance about equally divided in good rail and land timber with good sugar orchard. Soil good for grain or grass. Three large barns with stabling attached for fifty horses.—Story and half house, kitchen and wood shed attached. Buildings all nearly new and in good condition. Ten per cent down, the balance can remain on a long credit For any further information, address, (post paid,) H. HUNTER, Rochester City, N. Y.

July 1—ju. & sept.

HORSE POWERS.

FARMERS in want of good Horse Powers and Threshing machines, will find them at the Albany Agricultural Warehouse and Seed Store. For description and recommendations, See Feb. No. of Albany Cultivator, for 1847 & 1848—also May No., 1848.

Descriptive Catalogue gratis.

SALE OF SHORT HORNED CATTLE.

I WILL Sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers, and young Bulls A catalogue with their pedigrees will be ready at the time of the fair.

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and six South Down Rams.

References—A. B. Allen, N. York; Sanford Howard and B. P. Johnson, Albany; Francis Rotch, Butternuts; and L. F. Allen, Black Rock. **JOHN M. SHERWOOD.**

Auburn, May 16, 1848 —4t

AMERICAN AGRICULTURAL WAREHOUSE AND SEED STORE.

S. C. HILLS & Co., No. 43, Fulton Street, (removed from 189 Water Street) offer for sale, Prouty's Ploughs and Horse Rakes, Mayher's and Moore's Ploughs, Corn Mills, Corn Shellers—Catchpole's very superior Stalk and Straw Cutters, Hovey's do. do., Grain Cradles, Churns, &c. &c. Also, Garden and Flower Seeds, raised by the Shakers, and warranted good; Fruit and Ornamental Trees and Shrubbery, supplied on short notice.

June 1, 1848 —3t

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen. **H. L. EMERY.**

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost. Clark Lewis, 2d.

German, Chenango Co. N. Y., April 15, 1848.

THE OLD MORGAN GIFFORD.

THE highest blooded Morgan Stallion, now remaining, will stand this season at the Stable of F. A. Wier, in Walpole, N. H.

Terms, $25, five dollars of which to be paid at the time of service, and the remaining $20 if the mare proves in foal. Pasturage furnished as usual.

FRED. A WIER,
ELISHA DEWOLF, Jr.
AMBROSE ARNOLD, } Committee of the Proprietors.

June 1, 1848 —3t*

KINDERHOOK WOOL DEPOT.

THIS enterprise having met the expectations of its projectors, will be continued upon the following principles:

The Fleeces will be thrown into *sorts* according to *style* and *quality*.

A discrimination will be made between wool in good or bad condition.

All who desire it, can have their clips kept separate.

Sales will be made invariably for cash.

The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25c. on $100 for a term of three months.

Liberal advances in cash made on the usual terms.

Arrangements have been made with Manufacturers using different grades of wool, to purchase the various sorts at their market value soon after being received at the Depot If the opening market price is not satisfactory, the wool will be offered for sale at such time as the owner may direct

Reference can be had to

Dr. J. P. Beekman, Kinderhook; D. S. Curtis, Canaan;
C. W. Hull, New Lebanon; J. B. Nott, Esq. Guilderland;
C. H. Richmond, Esq., Aurora; Col. J. Murdock, Wheatland,
B. P. Johnson, Esq., Sec., [N. Y.;
N. Y. St. Ag. Soc. Albany.

H. BLANCHARD, Agent.

Kinderhook, N. Y., June 1, 1848.—3m

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

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F. A. GIFFORD.

Hudson, May 9, 1848—5t*

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April 1—4t.

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From the Farmer's Visitor, by Gov Hill, N. H.

As the Editor of that excellent agricultural paper, the Boston Cultivator, and other kindred works, Mr. Cole has shown himself well qualified for the compilation of this work. We have known him for years, and he has proved himself to be one of the most persevering and able of our agricultural editors. We understand his new book has already had a free and extended sale. Many times its price to almost any farmer, may be saved in its purchase.

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For sale at the office of "THE CULTIVATOR." June 1—3t.

SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England.) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.

Troy, May 1st. 1848—4t.

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Geneva. April, 1848—6t.

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DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

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April 1—4t.

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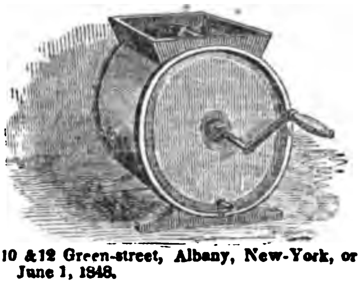
May 1, 1848—6t. Cabotville, Mass.



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June 1, 1848. H. L. EMERY.

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THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

Edited by A. J. DOWNING, Esq.

PUBLISHED at the office of the Cultivator, Albany, N. Y., by Luther Tucker, at $3 per year.—Two copies for $5. Vols. 1 and 2, completed with the June No. 1848, now ready for sale, either bound, or in paper covers to send by mail.

Contents of No. 1, Vol. III—for July, 1848.

Hints to Rural Improvers—Memoir of the President of the Massachusetts Horticultural Society—Further Notes on the Strawberry Question—Remarks on Hybridizing Plants—Successful Mode of Growing Gooseberries—Insects on the Native Grapes—The Red Diaper Plum—Cure for Plum Tree Knots—Hints to Cultivators of the Pear—Diseases of the Peach Tree in Western New-York—A Peach Orchard Resurrection—Ornamental Vases and Chimney Tops—The Beautiful Gardens of Italy—Design for a Small Cottage—Northern Spy Apple—Transactions of the Mass. Horticultural Society—Cleveland Cherries—The Pomological Convention—Raspberry Culture—Pomological Convention at New-York—The Character of the Strawberry—Cherry Trees at the South—Horticulture at Nashville, Tenn.—A word for Botanists on the "Great Strawberry Question"—Thorburn's Exotic Nursery—Perpetual Roses—Answers to Inquiries—Proceedings of the Massachusetts, Albany and Rensselaer, and Pennsylvania Horticultural Societies.

ILLUSTRATIONS.—*Plates.*—Portrait of Col. Wilder and view of a Cottage, together with thirteen wood engravings.

The Horticulturist for June is before us. This number completes the year, during which we hesitate not to say, every subscriber has received quadruple of valuable information over the cost of the work. The June No. has many valuable articles, which should be read by all Horticulturists, and we trust for their own interests, all will subscribe for the work, commencing with the July number, being the first for the ensuing year.—*Cleve. Herald.*

The June number, which completes the second volume, reached us a day or two since. We are pleased to learn from the publisher that it has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. It deserves this success. For editorial taste and ability, beauty of typography and embellishments, it is not surpassed by any periodical with which we are acquainted.—*Alabama Planter.*

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OF most of the celebrated fine varieties, for sale at the nursery of J. J. THOMAS, Macedon, Wayne Co., N. Y. Among these are the following:—Hovey's Seedling, Large Early Scarlet, Dundee, Prolific Hautbois, Duke of Kent, Black Prince, Boston Pine, Swainstone's Seedling, Myatt's Eliza, Hudson Bay, Red and White Alpine, &c. A part can be furnished in quantity at 75 cents to $1.25 per 100—the remainder at 19 to 38 cts. per dozen. Packages forwarded by Express, and no charge for packing where orders amount to $3 or more.

Several of the above named varieties, with common culture, usually attain an inch to an inch and a-quarter in diameter, and are of excellent quality. If the roots are immersed in mud when set out, they may, with a few waterings, be transplanted in summer with scarcely a failure; and they should in no case be set later than the first of autumn, that the roots may become well established before winter, and good crops be afforded the next summer.

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August 1, 1848.—2t.

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THE Subscriber offers for sale his farm situated in the town of Ghent, Columbia county, N. Y. 10 miles from Hudson, on the Hudson and Berkshire Railroad, four miles south of the Chatham Depot on the Western Railroad, ½ mile east of the Union Turnpike, and 7 miles from the village of Kinderhook.

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TOBIAS L. HOGEBOOM.

Ghent, July 13, 1848.—2t.

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NOW landing from ship Aglare, a very superior cargo of Patagonian Guano. Price $35 per ton, for all quantities exceeding 1,000 lbs. Apply at the New-York Agricultural Warehouse and Seed Store, Nos. 189 & 191 Water-street, New-York.

July 1, 1848.—2t. A. B. ALLEN & Co.

THE CULTIVATOR

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, SEPTEMBER, 1848. No. 9.

USE OF BONES AS MANURE.

It is now 40 or 50 years since bones began to be used extensively as a manure in Europe, and within the last 20 years immense quantities of them have been applied to the lands of England and Scotland, by which means tracts have been brought into profitable cultivation which were before entirely unproductive. Bones have, indeed, been exported in no inconsiderable quantities from our own country to Great Britain, and there made to yield the means of support to a manufacturing population, the products of whose labors have been returned and purchased by us.

If bones can be made thus useful to the British farmer, it is reasonable to believe that their proper application would be attended with useful results here. In the older settled and most populous parts of this country, there is a scarcity of manures, and a constant demand for such as can be advantageously used. Hence we think a knowledge of the proper preparation of bones and the best mode of applying them would be of great utility. We have on a previous occasion, alluded to an article on this subject, by Prof. F. W. JOHNSTON, published in the Transactions of the New-York State Agricultural Society, for 1847, and we think our readers will be benefitted by a careful perusal of the following extracts. In regard to the preparation of manures with a view of meeting the special wants of various soils and crops, Prof. J. thinks chemistry will by-and-by be able to direct; though he thinks it probable that "quackery will for awhile beset the steps of the farmer, and defective knowledge, especially of practical agriculture and of physiology, will lead the chemist astray." Nevertheless, the result, he believes, "is sure of being accomplished at last." In the mean time, he advises that we have "perfect faith in the science herself, while we, at the same time, exercise a reasonable distrust towards those scientific men who profess to know all, and to be able to do and to explain everything."

The essay of Prof. J. is quite elaborate, and goes fully into detail, in regard to the composition and uses of bones as manure. It is divided into ten sections, of which we give the following, which comprises the most essential parts.

COMPOSITION OF BONES.—Bones differ slightly in composition in different animals; they vary also with the age of the animal and the part of the body from which they are taken. The following composition of the bones of the cow will represent very nearly that of the bones which are usually applied to the land.

Organic Animal Matter (gelatine,)...	33¼
Phosphate of Lime,..................	55½
Phosphate of Magnesia,..............	3
Carbonate of Lime,..................	3¾
Soda and Common Salt,...............	3¼
Chloride of Calcium,................	1
	100

When bones are burned in the open fire, the animal matter they contain—the gelatine—disappears, and the white *bone earth* alone remains. These two portions of the bone, the combustible or organic, and the incombustible or inorganic part, are equally essential to the fertilizing action which the bones produce. As some inexperienced writers have disputed this in regard to the organic part, it will be proper briefly to advert to its composition and mode of action.

COMPOSITION AND MODE OF ACTION OF THE ORGANIC PART OF BONES.—The gelatine of bones consist of,

Carbon, ...	50.37
Hydrogen,...................	6.33
Nitrogen,...................	17.95
Oxygen, ...	25.35
	100.

It is identical in composition with horn and with isinglass, and is very nearly the same as hair, wool, and skin. It is of importance to recollect that it contains about 18 per cent, or one-sixth of its weight, of nitrogen.

That this organic part is *likely* to act beneficially as a manure, is rendered probable by the fact, that horn shavings are highly valued as an application to the land, and that the parings of hides and woolen rags bring a high price in the market as manures for certain crops.

But that it *does* act beneficially is proved by the success which attends its use, when separated from the earthy part of the bones. In Manchester, bones are boiled for the extraction of a size (glue,) which is used in the stiffening of calicoes. When the stiffening liquor is so exhausted as to be unfit for farther use, it has been applied as a liquid manure to grass-lands, with the greatest success. There can be no reasonable question then that upon the organic part of bones, their beneficial action as a manure in some degree depends. It is only surprising that chemists of name should have been found to deny it, and that practical men should have so far distrusted their own experience as to have believed and acted upon such an opinion.

But how does this organic matter act? It no doubt feeds the plant, but it may do this in one or other of two ways. It may either be completely decomposed in the soil, and enter the roots of plants,—as Liebig supposes all organic nourishment to enter—in the form of carbonic acid and ammonia; or it may be rendered soluble in the soil, and may thus be taken up by the roots, without undergoing any ultimate and thorough decomposi-

Now, supposing it to be resolved into carbonic acid and ammonia, the quantity of gelatine contained in 100 lbs. of dry bones is sufficient to produce upwards of 6¼ lbs. of ammonia, as much as is present in 20 lbs. of sal ammoniac, or in 30 lbs. of crystalized sulphate of ammonia. Supposing the animal matter of the bones to be thus decomposed in the soil before it can be useful to the plant, few, I think, will question that the quantity of ammonia it is likely to produce would materially aid the growth of the crops to which bones are applied.

But I do not think this final decomposition necessary. The large quantity of nitrogen which the gelatine contains, may, I believe, be taken up by the plants without being previously brought into the state of ammonia. The gelatine being rendered soluble in the soil, may enter the roots and may at once minister to the growth of the plant, just as the gluten of the seed, being rendered soluble when the grain germinates, ascends with the sap, and feeds the young plant. It would be out of place here to discuss this point, or to give the reasons which induce me to entertain this opinion. It is sufficient for the practical man to know, that which ever of these views a man may hold, he must still grant that the gelatine of the bone is valuable to the farmer. Whether its nitrogen enter into the root in the form of ammonia or in some compound state, it must be useful to the plant, and, therefore, he who advises the farmer to burn his bones, or would persuade him that the earthy part alone, or *anything equivalent to this earthy part* would alone be as useful to his land as the entire bone, advises him to his hurt, and would persuade him to that which would eventually be a source of loss.

MODE OF ACTION OF THE INORGANIC PART OF BONES.—The composition of the incombustible part of bones, the bone earth, has been given above. It consists chiefly of phosphate of lime, with about three per cent each of phosphate of magnesia, carbonate of lime and salts of soda.

All these substances, of which its bones consist, the Ox must have derived from its vegetable food. They must therefore be present in all fertile soils. And if a soil is poor in these substances, or is wholly void of them, that soil must be improved by the addition of these things. In other words, they must be invaluable as manures to such a soil; and hence the worth of bones to the practical farmer.

Sprengel long ago reasoned thus; and he asserted that the indications of theory were proved by experience—that burned bones actually fertilized the land.

Liebig followed him; but more boldly pronounced that the whole value of bones as a manure, depended upon, and was derived from the earthy phosphates they contained.

In the Appendix to my published *Lectures on Agricultural Chemistry and Geology*, and in my *Suggestions for Experiments in Practical Agriculture*, published separately, I suggested with the view of settling this question to the satisfaction of all, that comparative experiments should be made with burned and unburned bones upon the same soils and crops, and with quantities of each, which should contain equal weights of the earthy ingredients.

Numerous experiments were in consequence, made in various parts of the Island, few of them exactly fulfilling *all* the conditions which were necessary to secure accurate comparative results. Some of them are recorded in the Transactions of the Highland and Agricultural Society, others have been published in the different agricultural periodicals of the day. I do not quote any of them, for they are not all concordant, but the general results were these:

a. Bones under favorable conditions, seldom fail when applied alone, in raising an average crop of turneps.

b. Burnt bones laid on alone, and in a quantity equivalent to that of ordinary manuring with bones, don't always succeed in raising an average crop of turneps.

c. In some rare instances again, and upon some soils, burnt bones actually raised a larger crop of turneps than an equivalent weight of unburned bones.

Burned bones therefore, as theory indicates, are useful to the land. But the employment of unburned bones is the safer and surer. This greater security must arise from the organic matter they contain, and therefore this organic matter cannot be without its use. Therefore, also, an artificial mixture, which contains nothing equivalent to this organic matter, can never be made to perform all the functions of bones. If the soil already contains a sufficiency of organic matter—or if this be added in the form of farm yard or other similar manure—then burned bones, or artificial mixtures of a similar kind, will be sufficient to produce the usual effects of bones. But if organic matter be deficient, the entire bones will always be the farmer's surest reliance.

The adoption of this second view, is at present opposed by the notion which many have been led to adopt—that if plants can only obtain saline matter from the soil, they will draw organic food enough from the air. The ammonia of the atmosphere it is said, will give nitrogen enough to the plant—and thus, in the case of bones, their organic matter is useless, since the air will readily yield to the plant, what we suppose this organic matter to impart to the roots. But I believe the minds of our thinking men will soon be disabused upon this point; and that in a few years, this opinion will have found its long resting-place, among the other singular fancies, which, year by year, afford ephemeral occupation to the novelty-loving among our gentlemen farmers.

METHODS ADOPTED FOR INCREASING THE SENSIBLE EFFECT OF BONES.—Without referring much to the effect which bones might theoretically be expected to produce, it has been observed by practical men that they may be made to act more quickly and more beneficially by the adoption of certain previous precautions, such as,

1. *Reducing them to fine powder*. I have already alluded to the fact ascertained by experience that the finer the powder, the more immediate and the more sensible the effect of bones. But practical men were afraid to venture too far in diminishing the weight of manure, added to the soil. Bulk was considered to enter as an element into the fertilizing capabilties of any substance. Many leases even prohibit the addition of less than 16 or 20 bushels of bones, when used alone in raising turneps. But under the guidance of science, both tenants and proprietors will, by and-by, learn to estimate more correctly what the crops really carry off, and what the soil therefore requires. Thus a strictly scientific economy will be established, and no more of any thing will be added to his fields than the farmer knows and *understands* to be necessary to maintain them in a state of permanent fertility.

2. *Heating the bones*. In some districts their action in hastening forward the young turnep, and bringing it quickly into rough leaf, where it is safe from the attacks of the fly, is increased by laying the bones in a heap, and covering them over with earth, for a week or ten days before they are drilled into the land. Left in this state, they heat, soften, and begin to change or decompose; and thus, when laid in drills near the seed, they are ready to furnish nourishment to the young plant as soon as the roots first thrust themselves downwards from the sprouting seed.

3. *Fermenting them with dung*, or the same decomposition is effected and carried further by mixing the bones with farm yard manure, and leaving the mixture

awhile to ferment. It was the result of trials made by thirteen different persons, and which are recorded in the Doncaster Report, that a given weight of bones, when mixed and fermented with farm yard manure, invariably produced a more beneficial effect, than the same weight of dry-bone dust, applied to the same crop and upon the same soil.

The advantage which results from these several methods, arises from the effects which they produce, either in diminishing the mechanical coherence of the particles of the bone, or in altering by incipient decomposition, the chemical state of the organic matter it contains. None of them, however, sufficiently effect these objects, though I do not doubt that fine bone-dust, fermented for two or three months with farm-yard manure, and occasionally turned over, would be brought into a condition more nearly approaching to guano in its fertilizing virtue, than any other form of bones which has hitherto been *generally* employed.

Decomposing and Dissolving Bones by means of Sulphuric Acid.—But another mode of preparing bones has recently been introduced, and for two or three years has been extensively employed as a part of the ordinary husbandry, especially by some of the Scottish farmers. This mode consists in decomposing, and more or less dissolving bones in sulphuric acid, (oil of vitriol.) This may be done in various ways, and the prepared bones may either be applied in a liquid state with a watering cart, or may be dried and sowed with a drilling machine, or broadcast, like ordinary bone or rape dust.

a. The bones in the form of bone dust, or where bone mills are not at hand, simply broken in pieces with a hammer, may be put into a cast iron, stone, earthen ware, or strong wooden vessel, mixed with half their weight of boiling water, and then with half their weight of the strong oil of vitriol of the shops, stirring constantly while the latter is slowly poured in. A powerful boiling up takes place, which gradually subsides.

By occasional stirring, the whole assumes the appearance of a thick paste, the pieces of bone gradually disappear, and after a week or ten days the whole may be taken out and mixed with a little charcoal powder, charred peat, saw dust or fine dry earth, to make it dry enough to pass through the drill, and may thus be immediately applied to the land. It would, however, be better to prepare the bones a month at least, before using them and lay them up in a heap for a while, with a view to their more perfect decomposition. When the pieces of bone are large, this is especially desirable, as otherwise they will not be fully decomposed without a larger addition of both water and acid.

b. Or the acid and bones as above, may, after a couple of days, be mixed with a quantity of light, friable soil, and laid up into a heap for seven or eight weeks, with occasional turning. The bones thus heat, decompose and dry up, so as to be ready for putting into the drills without further preparation. This method, however, requires more acid, and it is not unusual in employing it, to take equal weights of acid and bones. It may be, some practical men, indeed, employ invariably equal weights of acid and bones, while others are satisfied by mixing the bones with one-third or even one-fourth of their weight of acid. I would myself employ not less than a-half.

c. Or equal weights of bones in the form of dust, of boiling water and of acid* may be mixed together and occasionally stirred for a week or ten days, and when the particles of bone have nearly disappeared, from 50 to 100 times more water may be added to the mixture, and the liquid thus diluted may be applied by a water cart. If it is to be used upon grass land in the spring, or to young corn, it will be safer to dilute it with 200 waters, but fifty waters, (by weight,) will be enough if it is applied to the turnep drills. A common watering cart used for other liquid manures, will serve for the former purpose—for applying it to the drills, a very ingenious addition of tubes to this cart has been contrived by Mr. Wagstaff, and employed by him under the direction of the Duke of Richmond, at Gordon castle.

This method of applying bones in the liquid form, is, no doubt, the most perfect, but it is also the most troublesome and expensive, and may not, therefore, come so soon into general use, though it may ultimately prove the most profitable.

Instead of sulphuric acid, the muriatic acid or spirits of salt, has been, indeed was first, tried for the dissolution of bones, but the former appears at present, for several reasons, to be preferred.

Comparative Effects of Dissolved Bones.—The first experiments with dissolved bones were made in 1841 by Mr. Fleming of Barochan. The result is published in the appendix to my published *Lectures on agricultural Chemistry and Geology*, p. 28. He dissolved bones by means of muriatic acid and applied them to moss oats. In his report to me, published as above, he says: "I examined them a few days before they were cut, and was much satisfied with their appearance. The straw appeared as stiff and shining, and the ear was as well filled, as if it had been grown upon stiff loam, and *I consider the same dressing*, (he had applied it as a top dressing sown broad cast upon the young corn) *applied to grain crops upon moss will insure a good crop and well filled oats.*" In 1842, he made many additional experiments, which he was kind enough to communicate to me for publication in my lectures. Those upon oats confirmed the results of 1841, but I quote only the following comparative results from the appendix, p. 8. The turnpes and potatoes were raised with bone alone, without other manure.

Produce from an Imperial Acre.

	Dry Bone Dust.				Bones in Muriatic Acid.			
	16 *cwt.*		18 *cwt.*		4 *cwt.*		10 *cwt.*	
	Tons.	Cwts.	Tons.	Cwts.	Tons	Cwts.	Tons.	Cwts.
Swede Turnep,	14	17	—	—	—	—	18	11
Red Don Potatoes,	—	—	9	15	12	15	—	—

Both of these results, as I have observed, were greatly in favor of dissolved bones. In the case of the potatoes he found the produce a little augmented by the addition of wood ashes.

Since that time, numerous experiments with dissolved bones have been made in Scotland. In Fifeshire, crops of turneps have been raised at a cost of not more than 8s. or 10s. per acre. In Ayrshire, Mr. Tennant of Shields, as early as 1842, used as much as 200 bushels of bones on his own farm, prepared as above described, (*b*.) and he found 2½ bushels to be equal in effect to 2 cwt. Peruvian guano. In 1843, a premium offered by the Morayshire Farmer's Club caused numerous experiments to be made in that county. I have given an abstract of the very important results of these experiments in the 4th edition of my *Elements of Agricultural Chemistry*, p. 155, and the report has since been published in full in the Journal of the Royal Agricultural Society, p. 447. In 1844, the premiums of the Highland and Agricultural Society led to many other experiments; the results of which, made in different ways and upon different soils, are published in their Transactions for 1844. These general conclusions are,

1. That four, and in some cases, even two bushels of dissolved bones will produce as good a crop of turneps as sixteen or twenty bushels applied in the usual form. The crops also start more quickly and grow more rapidly.

2. That the more complete the state of solution or subdivision of the bones, the greater the effect. Hence,

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* A gallon of water weighs 10 lbs., a gallon of acid 17 or 18 lbs

when applied in the liquid state, the benefit is most apparent.

OUGHT ANY OTHER SUBSTANCES TO BE MIXED WITH DISSOLVED BONES?—Bones are known to exercise a comparatively feeble action upon stiff and undrained clays, and it may, therefore, be reasonably asked by some if the action of dissolved bones will be more certain upon such soils than the bones in their natural state? We may, I think, answer this in the affirmative, since the principal cause of the less conspicuous effect of bones upon such soils is to be found in their tenacity and coldness, by which the particles of bone are shut out from the air, and their decomposition is retarded.

But inasmuch as bones do not contain the whole of the substances which plants require, and as some of those which are present in bones, the salts of soda, for example, are in small quantity only, it may be reasonably asked again, if the dissolved bones would not be improved, and their efficacy increased, and rendered more *sure*, were an addition of certain substances to be made to them. Of this I think there can be little doubt, though the necessity and nature of such additions will depend much upon the nature of the soil to which they are to be applied. A small per centage of pearl ash or wood ashes, of nitrate of soda, or common salt, and a sulphate of magnesia—5 lbs. each of the potash and soda salts, and 10 lbs. of the magnesia salt to each 100 lbs. of bones—would render the mixture more suited to every soil and crop. At the same time, if the soil, like those formed from the felspar rocks, abound in potash, or like those which border the sea, be rich in soda, or like those which owe their origin to the slates, or to the magnesian limestones, contain already too much magnesia, any addition to these several substances would obviously be thrown away. The principle of adding such things being recognised as sound, the knowledge and discretion of the farmer must be exercised in determining how far such additions are likely to be profitable, or he may make a small preliminary experiment by way of trial.

In conclusion, I may remark that the more extended use of this mode of preparing manures—creating, as it must, an increased demand for sulphuric acid, and consequently for the raw materials from which this acid is manufactured—will exhibit another illustration of that intimate connection, which must always, in a healthy state of things, exist between the agricultural and the manufacturing and the mining interests, and of the certainty with which the advancement of these interests must lead to the greater extension and prosperity of every other department of the national industry.

HABITS OF INSECTS.

The remarks of a correspondent of the *Cultivator*, under the head of "Spare the Spiders," suggest the importance of a knowledge of the habits of insects. The innumerable number of these, and the immense consequences depending upon them, are seldom properly considered. Many tribes attack the crops of the farmer, which fail more frequently from this cause than any other, except, perhaps, the effects of unfavorable weather. Famine and pestilence have at several periods ensued from their devastations in various parts of the Eastern Continent, and even in our own country, they have often occasioned great losses and no small amount of human suffering. The "staff of life" has been nearly cut off in many instances, by the attacks of that tiny depredator, called the Hessian fly, and its equally insignificant congener, the wheat midge. Various crops have been destroyed by the wire-worm, the cut-worm, and the grasshopper; our fruits have been blasted by the caterpillar, the canker-worm, the curculio, and the aphis; and even the trees themselves destroyed by the insidious workings of borers and worms. Other species, again, prey on our domestic animals, and some directly attack, annoy, and injure the human race.

The more we know of these formidable enemies the better we can protect ourselves against their ravages. And in this view of the subject, perhaps there is no one fact of greater importance than this: nearly every species of insect that is injurious to man, is preyed upon and destroyed by some parasitic or predacious enemy. However revolting, at the first thought, may appear this system of perpetual warfare among the tribes, it is evidently a wise and benevolent principle, calculated to preserve the proper balance in this department of organic life, and affording proof that

"Nature's differences are Nature's peace."

In regard to one of the most destructive insects to the farmer, the Hessian fly, (to which allusion has been made,) its natural enemies are an important check to its increase. "Other insects," says Dr. Fitch, "have been created apparently for the very purpose of preying upon this, and thus preventing it from becoming inordinately multiplied."

There are several species of these *ichneumons*, as they have been named, but one called the *Ceraphron destructor*, is the most common. It is a small bee-shaped insect, not much larger than the Hessian fly, and in the spring may be sometimes seen in great numbers in wheat fields; and the circumstance that it is often mistaken by farmers for the "fly" itself, strikingly exemplifies the necessity of understanding the economy of insects.

This ichneumon attacks the "fly" while in the "flax-seed" state, the latter lying dormant encased in a covering, which resembles in form and color, a flax-seed. It is between the stalk of wheat and the surrounding sheath. Instinct enables the ichneumon to know where its prey is lodged; it punctures the sheath, and deposites its egg in the body of the larva; the egg hatches and becomes a worm, which preys upon and destroys the larva of the "fly." It is thought by some naturalists, that at least nine-tenths of the larva of the Hessian fly are destroyed in this way.

Another very minute parasite of the Hessian fly, a species of *Platygaster*, according to Prof. Herrick, deposites its own eggs in those of the "fly." The latter hatch, and the worms pass into the flax-seed state with the young parasites in them, but they are destroyed before the next transformation is effected, and the parasites leave the shell.

Your correspondent before alluded to, has well illustrated the usefulness of spiders in destroying the troublesome house-fly, and in other respects. There are, however, several species of field-spiders which devour great numbers of crickets, grasshoppers, various kinds of moths, butterflies and beetles. If, towards the latter part of summer, we look at the surface of a meadow or stubble-field, early in the morning, while the dew is on and the sun is shining brightly, it will appear to be almost covered with spiders' webs. On examination, nearly every web will be found to have one or more of the above named insects in it, lately caught; and this ratio of destruction is carried on daily, through several weeks of the season.

The artful sagacity of the spider is in no case more displayed than when a grasshopper falls into his net. The moment the spider discovers his game, he decides on his course, which must be governed by the relative strength of the parties. If the grasshopper is very large, compared with the spider, the latter, on the principle that "prudence is the better part of valor," instantly cuts the threads of his net as closely as possible to the trespasser, and lets him escape with as little damage as possible to the premises. But if the grasshopper is not too large, the spider soon stops his *kicking* by the numerous coils which he throws around him with astonishing rapidity, taking care to bind strongly, the long legs of his prisoner, lest by their use he should spring from the web, or tear it asunder in his struggles. The largest spiders make the strongest webs, and are generally able to manage any insects that fall into them.

But the spider finds a powerful and uncompromising enemy in several species of the mason-wasp. The latter insect is well known from forming habitations for its young of mud or mortar, which is attached to the underside of the roofs of out-buildings, and other sheltered places. The cells in which the young are hatched and reared, are from an inch and a-half to two inches in length; arranged parallel to each other, each distinct and separate internally, but attached together by their outward surface. There are sometimes from four to six of them in a row. When the earthen house is completed, except the closing of the upper end of the long cells, which is done by a single lump of mortar to each, the female wasp deposites an egg at the bottom of each cell, and then proceeds to fill the cells with spiders, which are plastered in, their bodies constituting the food of the young wasp during its larva state, or till it passes through its transitions, and comes out a perfect wasp.

No particular selection is made as to the species of spiders—any being taken that can be crowded into the cells. They are put in *alive* too, and the labor of incarceration is by no means inconsiderable. I have repeatedly witnessed the efforts of both insects on the occasion. Sometimes the spider was so large, that a little exertion of its legs would render it difficult for the wasp to thrust it down the cell; but the work was always accomplished, though the amputation of the spider's legs sometimes became necessary.

Other species of the mason-wasp fill their cells with worms, instead of spiders. Doctor Harris has lately described one, which he calls the potter-wasp, that fills its cells with canker-worms, which it thrusts in alive, "*endwise*,"—five "*full-grown*" ones being put into each cell. Dr. H. remarks that if the worms were killed before they were imprisoned, they would become putrid before the young wasps were hatched; and the same may be said in regard to the spiders.

All the mason-wasps are exceedingly bold and rapacious, and seize their prey with surprising celerity—pouncing upon it with almost the quickness of lightning, and disabling it by a single blow, or probably by a thrust of its venomous sting. The subtle art of the spider avails little against so powerful an adversary, and he generally yields on the first onset.

The large *blue-black* mason-wasp, with beautiful purple wings, attacks and kills the largest grasshoppers, crickets and cockroaches, besides occasionally showing his Herculean prowess in slaying the large black spider of the forest, whose fangs are like blacksmiths' pincers, and whose body, covered with bristly hairs, would be thought safe from the attacks of any *common* enemy. I once witnessed a combat between a mason-wasp and such a spider as I have just described. The spider, though vigorous and active at first, soon appeared as if struck with paralysis, and though not dead, could make no effort to repel its conquering foe. As soon as the spider ceased its exertions, the wasp attempted to drag it under a piece of bark; but the weight was too great for the strength of the wasp—it could scarcely move the body of its victim.

Last summer, I saw one of the black mason-wasps, attack and kill one of the largest of the green-grasshoppers. By cutting off the grasshopper's long legs, he was quickly disabled. The wasp then excavated a hole in the ground, into which it rolled the carcase of the grasshopper, and buried it.

The aphis, or plant-louse frequently inflicts serious damage on the products and plants of the field and garden. Almost every kind of plant has its peculiar species of this insect. It possesses extraordinary powers of reproduction—*nine generations*, according to naturalists, being produced from a single impregnation. Their increase is therefore rapid almost beyond comprehension, and from only a few in the early part of the season, they soon swarm in innumerable numbers. All sorts of young fruit-trees, roses, and garden vegetables of different kinds, are sometimes overrun with them. They suck the juices from the fresh and tender leaves, which soon checks the growth of the plants—producing mildew and blight.

On the plants which are infested with the aphis, there is frequently seen various other kinds of insects, such as ants, flies, bees, the spotted lady-bird (or bug,) &c. Many people suppose that the object of all these insects is the same, that is, to feed on the plant or its juices; but their objects are only similar in one respect—all seek their food, though the food of the different races is quite dissimilar. All the aphis family excrete certain tubes through the posterior parts of their body, a sweet substance sometimes called *honey-dew*, of which many other insects are very fond. The ants, bees and flies are in search of this, and the former show great sagacity in obtaining it. They touch the aphides with their antennæ, which causes them to void the sweet drop, and it is instantly swallowed by the ants. From the constant attendants of ants in the manner described, the aphides have been called "the ants' cows."

The larva of the lady-bird, and the larva of several species of syrphidian flies, feed on the bodies of the aphides, and in many instances devour great numbers of them. Few farmers or gardeners are aware of the great benefit they derive from these rapacious little animals. The past summer, some currant-bushes and snow-ball trees were shown me that were literally covered with aphides. On close examination among the aphides I discovered a few of the larva of the lady-bird and a species of syrphus. As there were but few of these, I concluded they had but just discovered their prey. They continued to increase from day to day, and the aphides soon began to diminish, till in a week's time, scarcely one of the latter could be found.

Provided with a good magnifying-glass, I watched the movements of the aphis-eaters. The larva of the lady-bird and the syrphus, kept up a constant slaughter. The former seized the aphide with its long forceps, and soon sucked out their vitals, leaving nothing but a thin shell, which it threw away. One of them was seen to devour half a dozen aphides in the space of five minutes, and a similar destruction seemed to be kept up by all. The syrphus was attached to the leaf by a glutinous substance, in the midst of the aphides, from which position it constantly supplied itself with victims.

Had not this article been extended to (perhaps) an undue length, I would have given more particular descriptions of these predatory tribes. I trust, however, that what has been said may serve to show the importance of knowing the habits of insects, that we may, especially, be able to

> "Distinguish which to slaughter, which to spare."

In a future number, I propose to give drawings of some of the species referred to. W.

ACTION OF MARL AND LIME.

Editors of the Cultivator—In the article on "Manures—Their Nature and Action," in the June number of the *Cultivator*, an allusion was made to a mineral substance found in New-Jersey and farther south, and known as "green sand," which possesses very valuable properties as a manure.

I suppose it would be useless for me to say anything about marl. To all who are interested in it, it is already perhaps sufficiently well known. As stated in the article referred to, "its great value is chiefly due to the potash it contains."

But there is another mineral substance, which is found in a bed extending through a portion of the state from New Egypt to Vincentown, and is found I think, a few miles south of Haddonfield. I allude to what Prof. H. D. Rogers calls "a straw-colored limestone," but more particularly to the thin limestone stratum of the vicinity of Vincentown. This is not so well known nor so extensively found as the marl. Prof. Rogers' analysis of it gives "lime 49.69, carbonic acid 38.31, silica and other impurities, 9.00, water, 3.00—making about 88 per cent. of it carbonate of lime." In speaking of where the beds of limestone had been cut through, by digging a well into the green sand stratum underneath, Prof. Rogers says—"It was in thin irregular beds, separated by incohering sand and calcareous grains, similar to the mixture which composes the rock; its total thickness was about six feet; the organic remains are the same which characterize the limestone of Vincentown." It is now found in places from fifteen to more than twenty feet thick. But it is not the stone, to which I wished more particularly to call attention, but rather "the incohering sand and calcareous grains" by which its strata are separated.

If a test by effervescence with acid would be sufficient to judge by, I should suppose that this incohering sand contains nearly or quite as much carbonate of lime as the stone itself. If so, perhaps it may be called by way of distinction, pulverized limestone.

I suppose this bed of carbonate of lime was not placed there for nothing. In what way it may become useful to man, and to what extent? are questions of some importance. How far will pulverized carbonate of lime answer in the place of quick lime?

I think Liebig advances the idea in his Chemical Letters, that one of the most importaht uses of lime on land is, that by its caustic property, it may assist in disintegrating the soil, and rendering the alkalis, or potash contained in it, capable of becoming soluble in water, and thus taken up by the fibrous roots of plants requiring it.

And he illustrates this opinion by describing a plan for decomposing feldspar, a mineral which contains potash, and forms a component part of the most widely diffused of the primitive rocks. In this case, I suppose the carbonate of lime would be of but little use.

Yet some farmers who have been in the habit of using lime for many years, say they think a heap of lime, which has lain eighteen months or longer, and thus become principally carbonate, is quite as beneficial to the soil as one spread immediately after slaking.

It is known that almost all marls contain ingredients injurious to vegetation. These are principally copperas and alum. Although some contain a much smaller proportion of them than others; yet it is found that where land has been marled copiously for a number of years, a continued application of it, without lime, is attended with but little beneficial effect, while the soil seems to acquire a strong inclination to produce sorrel. Prof. H. D. Rogers recommends as an antidote to the poisonous principles contained in marl, the use of "caustic or freshly burnt lime." Yet a simple experiment will show that carbonate of lime will decompose copperas or alum, as well as the caustic. Take a little pulverized copperas, and mix it with a similar quantity of this pulverised carbonate of lime. Add a little water to the mixture. The appearance of rust or red oxide of iron in the mixture, will show that the copperas (sulphate of iron) is decomposed; while the effervescence will as surely indicate that the sulphuric is taking the place of the carbonic acid; and the latter being set free, in escaping causes the effervescence. In a similar experiment with alum, in the place of copperas a like effervescence will as readily indicate a mutual decomposition. And a practical agricultural experiment would seem to accord with those of chemistry.

A strip of land which had been marled several times within the last twenty years, (but had received no lime) was covered with a few loads of this pulverized lime. Two years afterwards, the part of the field manured with the lime bore a good growth of clover, while the other portions of it were red with sorrel.

In Playfair's edition of Liebig's Agricultural Chemistry, it is stated, that "in China, the plaster of old kitchens which have no chimneys but an opening at the top, is so much valued as a manure, that they will sometimes put a new plaster on a kitchen for the sake of the old." And the reason offered for the increased value of the plaster, is "The ammonia contained in the fuel forms nitrate of lime with the lime in the mortar." Is there not a portion of ammonia continually escaping in the summer season from every body's barn-yard? Would not a small portion of carbonate of lime spread over the yard, be as likely to retain it, as the plaster of a Chinese kitchen?

In the American Farmer's Encyclopedia, article Bones, it is stated that the shells of the oyster, lobster, &c., contain a small proportion of phosphate of lime.

The pulverised portion of this limestone, was without doubt, formed by the decomposition of sea-shells.

Were the marine shells of ancient times composed similarly to those of the present time? or have they been subject to a change in composition? And if they once contained phosphoric acid, would they be likely to retain it through so long an interval? If this lime contains only a little phosphoric acid, those who make use of it need not be at the labor and expense of procuring bone manure for their land.

It is true, there is no mention made of phosphoric acid in connexion with this subject in Prof. Rogers' Geological Survey; but his analysis was only of the stone. Probably, the strata of stone were formed by the shields of some animalculæ, similar to the madripore, and perhaps contained no sulphuric acid; while the pulverized mass which separates them, may have been formed by the disintegration of bones and shells, which were thrown together by the currents of the ocean.

I cannot tell whether any of these speculations are correct; I only claim that the subject is an interesting one; and would be glad either to change my opinions, or be more confirmed in them.

H. Grath, Jr.

New Jersey, July, 1848.

BUTTER FOR THE UNITED STATES NAVY.

You having given the substance of the article published in the Transactions for 1847, in relation to the manufacture of butter for the U. S. Navy, I doubt not it will be acceptable to the readers of the *Cultivator*, to peruse the annexed letter in relation to the subject from J. J. Hawley, of Binghamton. I endeavored to obtain the information contained in this letter, previous to the publication of the Transactions, but owing to misapprehension on the part of the gentleman to whom I wrote, I failed to receive it. Dr. A. Doubleday, however, on application to him, has procured it, and if anything was wanted, in addition to the facts already given, this letter supplies it, so that there can be no doubt whatever, that our state can in almost any section of it, furnish as good butter as *Orange County*—that will stand the test of tropical climes. Mr. Hawley saw butter which was made in *Broome county*, in 1840, and sold in New Bedford after having been a whaling voyage, and at the expiration of *nearly four years from its manufacture*, which was as sweet and in as good condition as when first made. But I refer to the very interesting details in the letter annexed.

B. P. J.

Agricultural Rooms, Albany, August, 1, 1848.

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The idea that no butter made out of Orange county, will "resist the action of tropical climates and preserve its qualities for years," is an utter absurdity. I think, that *not one-third* of the butter sold as "Orange county" is made in that locality. That county has during ten years past, sent out hundreds of emigrants to the counties of Sullivan, Delaware, Chenango, Broome, Tioga, Tompkins, Chemung, and perhaps others in the state of New-York, who have continued the manufacture of butter for market, and who, at the end of each season have been in the habit of transporting their butter in wagons across the country to the different points of shipment in Orange county, and there shipping it as from "Orange county." Many of the persons had, for ten years before emigrating, regular purchasers in New-York for their butter, who it was understood were to take their product each year, when made, and pay the highest market price for it. These relations were in many instances, continued for several years, previous to their emigrating from Orange county, and many now continue them without the least objection being made to the quality of the butter.

The term Orange County Butter seems to be misunderstood. * * It does not mean (as I understand it,) the locality where made, but a peculiar method of manufacture, the perfect neatness and cleanliness of everything about their dairies—the churning the *milk* instead of the cream, and the attention to the quantity and quality of the salt used, are the principal peculiarities. The churning the milk I deem essential to butter intended for long voyages. It gives it a peculiar firmness and fineness of texture, and wax-like appearance, which butter made by churning the clear cream, seldom has. These peculiarities can generally be detected by the eye. There is also a cream-like flavor, in milk-churned butter, which I have never found in butter manufactured in a different manner.

I believe the highest price paid for dairies in New-York, for several years past, has been paid for several dairies from Chemung county. Being at the table of a certain well known *gourmand* in New-York, in the spring of 1847, I remarked the very fine quality of the butter—He replied that such butter could not be made out of Orange county. The conversation continued, until finally the original firkin was brought up, when I found it was branded John Holbert, (Premium.) Mr. Holbert resides in *Chemung county*, and it will be recollected took the *first premium* at the State fair in Saratoga, in 1847, for butter made in June. This gentleman told me, he had his supply of butter *of this dairy*, for several years, of a particular grocer who alone sold it, at 33 cents per lb.

The opinion of the gentleman who has charge of the butter department of the U. S. Navy, "that no butter made out of Orange county, will resist the action of tropical climates," I know to be erroneous. A dairy made in this county, (Broome) has been sent abroad much of the time for ten years past. In 1839 it was sold in St. Croix, to the Governor, for 75 cts. per lb. In 1840, it was sold in New-Bedford, and went a whaling voyage. I saw some of it after the expiration of nearly *four years* from its manufacture, as sweet, and in as good condition as when made. The same dairy has since been sold in New-Orleans, in Natchez, and Mobile, and there never has been any complaint as to its quality.

I shipped some butter, that was the product of this county, to Canton, in 1846, which, under very disadvantageous circumstances, opened as fresh as when made, and proved so good, that the shippers have each year since applied to me for butter for cabin stores for their ships. I broke up the original firkins and procured a quantity of small white oak kegs, which would contain from 15 to 25 lbs. each, and repacked the butter, selecting the best from a large quantity. These kegs, when filled, were put in very large hogsheads, and the interstices filled with rock salt, and the casks placed in the hold of the vessel. This butter when sold, (about eighteen months after its manufacture) was in as good condition as when made. The small kegs were not used in reference to the preservation of the butter, but merely for convenience in retailing at Canton.

The exportation of butter for [illegible] supply of the different cities, that are along the southern coast of Asia, is probably destined to be a very considerable business. The entire supply for the immense cities in the possession of the British East India Company being derived from Europe, (mostly from Ireland, but some little from Holland,) and it is usually purchased at home, at a price which would fully pay an American shipper at its destination.

The relative proportion of our county, that is adapted to the finer qualities of butter, is probably as small as any other article of general necessity. But much of the southern tier of counties, and also of the central and northern portions of the State of New-York will, (when well cultivated,) produce the various grasses necessary to give butter the peculiar flavor and aroma of Orange county, when properly manufactured.

The emigrants from Orange county before alluded to, all agree in opinion, that as good butter can be made in their new location as in Orange county. Minnisink is cited in the circular as being the locality producing the best butter in Orange county. A Minnisink dairywoman in this vicinity, who had for many years the reputation of being one of the best in that town, made her first lot of about sixty firkins here last season, and says it was the best she ever made. All the Orange county emigrants agree in opinion, (and many of them are persons of much experience and close observation in their business) that in favorable situations they can produce as much butter and of as good quality as in Orange county. Yours, &c.

J. J. Hawley.

Binghamton, July 24, 1848.

N. B.—It will be seen on reference to the Transactions for 1847, page 45, that at Washington, it is distinctly understood "that no butter can stand the test of foreign climes, that is *not made in Orange county*," and this is what the gentleman connected with the Naval Bureau, understands by Orange County Butter. Mr. Hawley's explanation is what we understand by the designation of *Orange* butter—that which is rightly prepared so as to keep in any clime, and that it is not necessarily or in point of fact made solely in that county.

MANAGEMENT OF BEES.

I have read much written on the subject of Bees, their management, the Bee moth, &c., with but little benefit. I think, (judging from my own experiments, as well as from trial of the recommendations of others,) that a different mode of operation, from what is generally laid down, is necessary to guard against the enemies of bees.

It will be unnecessary for me here to enumerate the many plans and inventions that have been sought out, to guard against the moth, but I would suggest a different plan; though I do not know as it will answer for any other place than the section in which I live. Other places may be far more troubled with them, but I would just say, if they are any worse in any other place than here, they must be bad enough; for few keep bees here but a short time before they are very much injured or entirely run out, if kept on the old plan. When I speak of the old way, I mean letting them swarm as often as they will, and putting swarms into hives by themselves, without any regard to their size or the time they come out.

Most people seem to think the greater number of hives they can count, the better *luck*, as they term it. Now from the experience I have had in keeping bees, a different course should be pursued in order to succeed well; and my own conclusion is not a hasty one, for I have kept bees about twenty years; though during several years of the former part of that time I did not succeed very well; for I used to manage upon the old plan, and at the same time tried many experiments with them, some of which did not succeed as well as I had anticipated; but during the last ten or twelve years I have realized my most sanguine expectations.

My plan is not to count my army by the tents they occupy, but by the working men in them. I have all my hives strongly peopled, that they may not only repel an enemy, but drive them away. When a hive is strongly peopled, none of their common enemies will attack or injure them;—at any rate, it is only weak hives that are attacked by the bee moth, or robbers. I never knew an instance of a strong hive being injured, unless some accident had happened to the comb.

I may be asked how I can have my hives all strongly peopled? It can be easily done, but it requires some experience as well as skill, to do it successfully; but in this the main secret lies. Nearly all the first swarms, which come out before the twentieth of June, will be sufficiently strong, and will not only make honey enough to winter on, but in good seasons will make from two to four boxes (of twelve pounds each,) of surplus honey, that can be removed without impoverishing the hives; but nearly all second swarms need to be reinforced however, it frequently happens that a third swarm comes out so as to put one of them with a second swarm, which generally makes them large enough.* The size of a colony will be better understood by measurement in a hive than any other way. My hives are twelve inches inside and sixteen high in the clear, and when the swarm all settles in the hive, I want them two-thirds full at least; and when they fall short of this standard, I reinforce them till they come up to it. No fears need be entertained of their being too many bees in a hive, for the more bees the more honey they will make in the boxes. I have frequently had two of the first swarms go together, which have filled the hive of bees; such hives generally do best, and make far the most surplus honey; and are much better to go into winter quarters.

Hives frequently cast two and three swarms apiece, which reduces the stock in the old hive so low, that they are unfit for wintering; I let them cast their late and small swarms until all my swarms are sufficiently reinforced, and then, what comes out afterwards, I manage in the following way.

I take a small hive and set it on a table for hiving, put the bees in front of the hive, and start them in moderately, and with a goose quill separate them until I can find the queen, which I destroy. It is necessary to keep a close watch until they all go into the hive, for sometimes there are two or three, and even more queens, in second and third swarms, which, if not destroyed will remain in the hive, and not return to the one from which they came. If they do not go back by night, there is generally a queen left, and when that is the case, just at dark I take the hive and strike it pretty smartly on the table, and jar them out, and examine for another queen. The next morning they generally return to the parent hive.

Hives that have overswarmed themselves, are the ones the bee moths or robbers attack. Now these old feeble hives must be reinforced, or there is danger of their being destroyed by their enemies; or if they escape these there is danger of their dying in the winter in consequence of the want of warmth, being so few in number. It frequently happens that some of these over swarmed hives are old, and unfit for wintering. I take the bees out of such hives, to reinforce weak ones with. This should be done soon after the swarming time is over. With the hives that I have to reinforce, (when I have not old hives to reinforce them with,) I go to some of my strongest hives that have boxes on the top full of honey and bees, and take one or two boxes just as seems necessary, and put them on the weak ones, in order to make them sufficiently strong for wintering. The bees in the boxes hardly stir for a day or two, then they all agree and go on to work with renewed vigor.

I might here state that I never destroy any bees. Weak hives seldom ever quarrel with their new companions. In swarming time, different swarms seldom disagree, unless the first swarm has been a considerable time in the hive, and the one put with them a much smaller one. If they ever do quarrel, an easy way to stop them is to run a small wire in their hive, and just start the honey in their comb. The uniting swarms should always be done just in the dusk of evening, and by morning they will all be united, when the hive should be returned to its stand. Now I have but little hesitation in saying, that any one keeping bees, whose motto is, "strong hives or none," will have but little cause for complaint from the bee moth. Lotan Smith.

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* I sometimes put three and even four small swarms together.

ECONOMY IN SAVING MANURES.

[The following article is the substance of a report on manures, read before the "Clinton Farmer's Club," by EDWARD NORTH.]

One of the great secrets of success in the culture of the soil, is *Economy*. This magic word is an "open Sesame" to wealth and independence. In order that the agriculturist may realize the largest profit from his labor and skill, he must be frugal and saving. He must be not more careful to avoid manifest extravagance, than he is to practice a system of rigid economy, which shall look in every direction Argus-eyed; and be applicable to every combination of circumstances.

He must *save* not only at the bung-hole, but also at the spigot, and thus arrest the injury wrought by those small dribbling losses, which viewed separately, appear of no account, while in the aggregate and the long run, they greatly diminish the returns of agricultural industry. In no department of rural labor, is there more to be gained by the exercise of economical ingenuity, than in the making, the saving and the using of manures. We are too much inclined, if I mistake not, to centre our regards upon the barn-yard, the stable, and the lime-kiln—too much inclined to place our main dependance upon these sources of fertilizing and stimulating agents, to the neglect of others not less worthy of attention. The different manures, and materials for creating manure, which may be secured and made available upon the precincts of every husbandman, are very numerous, and as valuable as they are numerous. Among the sources of manure frequently overlooked, or but partially drawn upon, may be mentioned the privy, the ash-bin and wood house; the henroost and pigeon-cote; the sink-drain and wash-tub; the marl-bed and peat swamp; the gullies and forest.

All these are mines of wealth to him who tills the soil, and when brought into full requisition, they have proved instrumental in the production of crops before unanticipated and unknown. The amount of waste that is often permitted by overlooking these deposits of fertilizing substances, cannot be easily and accurately estimated. Yet a single calculation which I have happened upon in my agricultural reading may serve to throw some light upon this matter. "The solid and liquid excrements of a man may be estimated at 1.65 lbs. per diem, or about 614 lbs. per annum. Containing 3 per cent. or 18lbs. of Nitrogen, a sufficient quantity, according to Boussingault, to produce 880 lbs. or about 15 bushels of wheat." Report of the Commissioner of Patents for 1844, p. 384.

Now if a farmer's family consist of five individuals, and the contents of the privy are wasted, there is an annual sacrifice of enough nutrition for growing 70 bushels of wheat. This calculation was made by a distinguished French chemist, and may be relied upon as sufficiently accurate. But even if the contents of the privy were less valuable, by a half, than is here estimamated, they ought still to arrest attention and provoke experiments with those who are solicitous to improve their farms and husband their resources.

The wasting of ashes is less common than that of bones. Yet the former are often suffered to lie in useless and unsightly heaps, when thrown from the leach tub; while the latter, of which every housekeeper may command a certain quantity, are seldom subjected to the process of burning and pulverizing, which converts them into an excellent manure. The chief constituent in the bones of all animals is the phosphate of lime, a substance absolutely necessary to the healthy vegetation of plants. The other principal ingredients are carbonate of lime and cartilaginous matter, both of which when decomposed, enter largely into the synthesis of vegetable substances. The cultivator of the soil will not be incredulous as to the power of vegetables to feed upon and digest the hard substance of crushed bones, when he is reminded that the ashes of wheat straw are composed of 61¼ per cent. of Silica, or flint, which is much harder than the hardest bone." Loudon's Magazine of Gardening, vol. 2, p. 319.

By carefully gathering up, from time to time, what is deposited beneath the perches of the hen-house and pigeon-cote, one may not only improve the health and fecundity of his fowls, but may also enrich himself with home-made *guano*, scarcely inferior to that brought from distant foreign shores, which smells so rankly of money as to find but little favor with any but amateur farmers.

The amount of fertilization that is pounded and scrubbed out of our clothes in the course of a year, would probably startle one who should see it written down in truthful figures. The farmer or gardener who suffers the precious contents of the wash-tub to be thrown away and wasted, especially when his plants and trees are withering beneath the heat of the dog-star, has reason to reproach himself with the folly of "spilling at the bung-hole."

Monday is a day of great rejoicing to trees, and vegetables, when they are allowed to count on a thorough soaking about sunset, with rich saponaceous liquid, furnished by the laundress.

I have been told of a farmer, who after having suffered the wash-tubs to be emptied into a filthy drain, deliberately proceeded to delugé his pet garden sauce with ice-cold water fresh pumped from the well. I shall not credit the statement without further evidence. Sometimes it happens that peach stones or pear pits, get planted, either by accident or whim, hard by the kitchen door. Trees so situated, almost invariably prove thrifty and productive. Their bearing qualities and the exquisite flavor of their fruit, are extolled by individuals in private, and by committees in public. All the world wonders how it came to pass that trees which seem to have sprung from the soil without asking any body's advice or permission, and which have reached their maturity without any body's nursing, should be so very healthy and prolific. The true explanation of this wonder, doubtless is, that the earth which such trees inhabit is fattened by the slops and dregs of the kitchen; and we are thus sharply rebuked for our want of economy in saving a species of manure so precious and so convenient. Nature herself is fond of elaborating manure, and as skilfull too, as she is fond. If we were half as industrious and efficient, or were more willing to avail ourselves of her proffered assistance, we should less often be heard to complain of poor and ungrateful soils. The little stream that divides the pasture or meadow, is ever busy at its task in collecting aliment for grasses and trees. To the products of its inanimate industry we are always welcome. In the silent woods, again, nature is constantly accumulating stores of fertilizing substance.

The leaves which blanket the earth in autumn, are at once brought under the influence of her subtle chemistry, and thus prepared for contributing to other and more durable forms of vegetable growth. The frugal farmer will not forget the forest. He will bring it under stated contribution. If gathered in autumn. leaves form excellent absorbents for the precious fluids so abundant in the stable and barn-yard, yet so often suffered to float off and evaporate. Or if left to decay where they fall, leaves make a valuable muck, especially when mixed with lime or ashes.

In Great Britain, where land commands a much higher price than with us, the principles of economy which I am aiming to recommend, have long since been faithfully tested, and are now generally observed in the management of soils. I have somewhere seen mention made of an English Cottage, whose garden was made to *manure itself*, and at the end of twenty years, without having made the acquaintance of a single forkful of barn-yard dung, the tilth was deeper, mellower, richer; the yield more abundant and of better quality than ever before. The manuring of the garden was managed somewhat after this fashion: All the refuse of the garden, such as leaves, vines, grass, haulm and weeds, was carefully saved and thrown into a pile. Every fragment of rubbish was gathered up and nothing wasted. To this were added scrapings from the road, drainings from the kitchen sink, and soot from the chimney. The liquid from the chambers was daily emptied upon this heap, and the whole was repeatedly turned over and intimately mixed, until the vegetable ingredients were decomposed. Once a year the garden received a good dressing of this manure, and with thorough cultivation the result was what I have indicated.

Before bringing these suggestions to a close, I must be allowed again to refer to the contents of the privy. On account of the repugnance which they inspire, fecal substances are often wholly discarded as an auxiliary of production, or else are so improperly managed as to occasion great waste.

It has been settled by experiment, that the sulphate of iron or copperas, is both efficient and inexpensive as an agent for disinfecting fecal matters, by changing the ammonia into a fixed salt. A hundred pounds of copperas may be had at the shops for about eleven shillings, and if a solution of this be occasionally applied to the privy, it will cause the noisome effluvia to disappear.

A two-fold purpose will thus be accomplished. By fixing the volatile ammonia, in which resides a fertilizing energy, the value of excremental manures is greatly enhanced, while the imprisonment of all offensive odors, renders them capable of being transported, diluted and applied, without any inconvenience or disgust. It is a point worthy of investigation, whether the application of sulphate of iron in solution, would not be of good service in the barn-yard. If each new layer added to the manure heap were sprinkled with copperas water, much of that most important element, the ammonia, (which is otherwise lost by reason of its volatility,) would be changed into a fixed salt, and thus saved.

For the facts which I have here submitted in regard to the employment of copperas as a disinfecting agent, I am indebted to the Report of the Commissioner of Patents, for the year 1844.

THE PROPER POINTS OF MILCH COWS.

I agree with the remark of "A Dairyman," in the August Cultivator, that we should not be satisfied with dairy qualities *only*, in milch cows. I am convinced, from several years' experience in keeping cows, that the best dairy qualities may be united with neat forms, good constitutions, good quality of flesh, and a tendency to thrive; and that cows combining these qualities are far more profitable than others.

This section has long been somewhat noted for good working oxen; the team work of our farms is performed by them, and they are always in demand, at from $125 to $175 per pair,—prices which render it an object to produce the best. Many of our farmers, therefore, in selecting or breeding their cows, attend not only to their points for the dairy, but to those also which denote their capacity to produce valuable oxen. They obtain strong, well proportioned, clean-limbed, hardy cows; and it has been found that such frequently produce as much *butter*, though they may not give the greatest quantity of milk, as any cows we have. They are easily kept, are long-lived, and free from disease; and their progeny, where proper regard is paid to the character of the sire, are valuable either for cows or oxen.

Some valuable ideas, in regard to milch cows, are given in an able article on the Jersey or Alderney cow, by Le Couteur, published in the fifth volume of the Royal Agricultural Society's Transactions. The cows of this breed have for many years been held in high estimation for the dairy, or more especially for butter-making. Formerly, little or no attention was paid to the shape of the animal; the Jersey farmer sought only for such as were good for the production of rich milk; "he was content," says Le Couteur, "to possess an ugly, ill-formed cow with flat sides, wide between the ribs and hips, cat-hammed, narrow and high hips, with a hollow back."

"Of the ancient race, it was stated, perhaps with truth, that it had no tendency to fatten; indeed, some of the old breed were so ungainly high-boned, and ragged in form, Meg Merrilies of cows, that no attempt to fatten them might succeed."

But careful attention in breeding has, we are told, greatly remedied this defect. "By having studied the habits of a good cow with a little more tendency to fatten than others, and crossing her with a fleshy, well-conditioned bull of a stock that was also known to produce quality and quantity of butter, the next generation has proved of a rounder form, with a tendency to make fat, without having lost the butyraceous nature."

The society above alluded to have a "scale of points" for bulls, and another for cows, which are as follows:—

Scale of Points for Bulls.

		Pts.
Art. I.	Purity of breed on male and female sides, reputed for having produced rich and yellow butter, ...	4
II.	Head fine and tapering, cheek small, muzzle fine and encircled with white, nostrils high and open, horns polished, crumpled, not too thick at the base, and tapering, tipped with black; ears small, of an orange color within, eye full and lively, ...	8
III.	Neck fine and lightly placed on the shoulders; chest broad, barrel hooped and deep, well ribbed home to the hips,.	3
IV.	Back straight from the withers to the setting of the tail, at right angles to the tail. Tail fine, hanging two inches below the hook, ...	3
V.	Hide thin and moveable, mellow, well covered with soft and fine hair, ...	3
VI.	Fore-arm large and powerful, legs short and straight, swelling and full above the knee,	

	and fine below it,	2
VII.	Hind quarters from the huckle to the point of the rump, long and well filled up; the legs not to cross behind in walking,	2
VIII.	Growth,	1
IX.	General appearance,	2
	Perfection,	28

No prize shall be awarded to a bull having less than 20 points.

	Scale of Points for Cows and Heifers.	P'ts.
Art. I.	Breed, on male and female sides, reputed for producing rich and yellow butter,	4
II.	Head small, fine and tapering; eye full and lively. Muzzle fine and encircled with white; horns polished and a little crumpled, tipped with black; ears small, of an orange color within,	8
III.	Back straight from the withers to the setting of the tail; chest deep, and nearly of a line with the belly,	4
IV.	Hide thin, movable, but not too loose, well covered with fine soft hair,	2
V.	Barrel hooped and deep, well ribbed home, having but little space between the ribs and hips; tail fine, hanging two inches below the hock,	4
VI.	Fore legs straight and fine, thighs full and long, close together when viewed from behind; hind legs short, and bones rather fine; hoof small; hind legs not to cross in walking,	2
VII.	Udder full, well up behind; teats large and squarely placed, being wide apart; milk veins large and swelling,	4
VIII.	Growth,	1
IX.	General appearance,	2
	Perfection for cows,	30

Two points shall be deducted from the number required for perfection on heifers, as their udder and milk veins cannot be fully developed. A heifer will therefore be considered perfect at 28 points.

No prize shall be awarded to cows, or heifers having less than 21 points.

These rules, with but few exceptions, would be approved by our best dairymen and stock raisers. In one point, that of a "*thin hide*," a variation would be preferred for so severe a climate as ours. A hide of more *substance*, but still "mellow" and elastic, would better enable the animal to bear the inclemencies of the weather, and would not in the least detract from its thrift or other good qualities.

Le Couteur states that the course pursued by the society has produced a great improvement in the Jersey cows; for while they are brought so near the standard of perfection that some are awarded nearly every good point in the scale, they are fully equal on the average, as dairy cows, to the old stock,—some of the improved variety giving fourteen pounds of butter in a week, and ten pounds per week being common, through the spring and summer months; and they give milk till within six weeks of parturition.

On applying the scale of points to the "Old Jersey Cow," the following points, according to Le Couteur, would be *taken from* her, viz:—

"Cheek large, 1—ewe neck, 1—hollow back, 1—cat ham, 1—flat side, 1—not ribbed home, 1—hind legs crooked, 1—general appearance, 1. In all 8; these deducted from 26, the number less the pedigree, leaves 18, which was about the average number the best cows had at the formation of the society."

Mr. Colman, in his "European Agriculture," speaks of the successful efforts which have been made to improve the Jersey or Alderney cows; and, as a specimen of what has been accomplished, refers to a young cow of this breed, which he saw at one of the cattle-shows. He thinks she was the handsomest of the cow kind he ever saw, and "gave the best promise of what a cow should be. She was of moderate size, compact, and well shaped, of that yellowish-dun color which generally characterizes the breed, with a large and golden udder, ears of an orange color inside, a thin and clean neck, and the bright eye of a gazelle."

E. A. G.

Worcester co., Mass., Aug., 1848.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Supports for Climbing Roses.

In ornamental gardening, it must always afford the mind relief to escape from the stiffness of artificial arrangement, to the freedom and grace of skilful combination of natural and beautiful forms and colors. It was with this feeling that we were particularly pleased with the late remarks of an English writer on the training of tall and climbing roses, on such trees as afford the best natural supports, instead of painted sticks or cast iron rods. Where, in all the cut and clipped pillars, is there anything equal to the wild Michigan rose of the west, ascending to the tops of forest trees, and covering them with its variegated bloom? An imitation, with improvements, of these natural beauties, cannot fail to be eminently pleasing.

The following extracts are worthy the attention of all gardeners of taste—but the practical fact must not however, be forgotten, that well prepared earth, and good cultivation, at least for a *few years*, will be essential to success:

"The mountain-ash, when growing as a tree, is admirably suited to prop a climbing rose. Its foliage is pinnate, and not to be easily distinguished from the foliage of the rose; the color of its trunk and that of the stem of the rose, are the same ashy gray; in size it is decidedly a small growing tree; in habit it is stiff and formal, with spray full of antlers or little hooks, all tending upwards, just as if Dame Nature had made a tree of pegs to hang her rosy mantle on." "Now, lest any one should imagine that I think of filling up a flower-garden with mountain-ash trees, I must beg leave to state, that where there is room for the rose-trees that I propose, there will be no lack of space for the stakes or props, for they will be within the rose-trees. These rose-trees were never intended for small gardens, and scarcely for large ones; they are the gigantic materials for fields of flowers high and wide, of long and deep avenues, the foreground figures fair and fragrant in the glades and dells of park scenery, where rides and drives invite. The bramble is another brother of the rose family, and this, as well as the mountain ash, rambles at large by ravine and crag, growing freely in any reasonable situation, and in spots where neither grazing nor tillage can be carried on. Surely, then, we may reasonably hope to establish a climbing rose in a locality where two brothers of the same family already flourish.

"The dwarf or weeping elm, engrafted on the common elm, forms an elegant head of this form; and, as these artificial drooping-headed trees are monsters, and grow slowly, they may be kept in dressed ground in small compass for many years. The one which I have before me has been four years planted; and one or two others, about ten years planted, have yet but very small heads. I may here mention that the young shoots of the elm resemble an immense pinnate leaf, and thus the leaf of the rose harmonises better with the foliage of the elm than I was led to expect before I made the comparison with the rose and elm twigs united.

"The weeping ash makes an admirable trellis for a climbing, or rather a trailing rose, and having pinnate leaves, the harmony of the foliage with that of the rose is complete. Nothing but a figure drawn accurately to a scale can give an idea of the excellent habit of this tree, standing as it does on a clean single stem, and forming a globular head with a fine bold outline, which may be varied by pruning to form an umbrella or semi-globular head, or may be allowed to feather down to the ground, and form an egg-shaped tent.

"Every weeping tree gives an idea of being depressed, and its very name 'weeping' implies a lack of comfort; therefore it should not be alone, but have a partner, whose rosy face should look upward, and at the same time look light and cheerful. To intertwine a weeping ash with roses would seem to mingle joy with its weeping, and make a striking contrast, since it could not fail to excite surprise to see a tree that usually hangs its head, and never shows a flower, come forth at last arrayed in such a bloom.

"Various devices have been resorted to, to hide the unsightly shank or stem of the standard rose, with more or less effect. I have sowed sweet peas around some, and planted other climbing plants round others, and have succeeded very well sometimes with such twiners as the ipomœas, &c., forming a cone of elegant flowers, and making the rose-stake serviceable to support a succession of flowers after the roses had faded. Still these creatures of a day, the ipomœas, &c., deserted me in my utmost need, for the least foul weather made them useless; and if they grew freely, they would not stop at any reasonable length, and, being so delicate when young, the smallest accident was sufficient to make a blank. The want of evergreens in a flower-garden in winter has long been felt, and, in short, to obtain a succession of beautiful living objects is the aim of every gardener in planting a garden.

"Now in this garden there exists, whether by design or accident I know not, a thicket of tall yew trees, and in front of these some very tall rhododendrons, and drawn up between the yews and rhododendrons, there stands a fine rose-bush, and, after the rhododendrons have flowered and faded, the rose blooms in the face of this "dismal grove of sable yew." And it is to this contrast of bright rose-color against dark green that I would invite notice: it sets off the rose to the greatest advantage, and always attracts attention, it being altogether unlooked for from such a sombre subject as the yew to wear a blush or other rosy hue upon its sullen face. Now, although the common yew tree be well adapted to support a climbing or other rose, from its patiently enduring to be clipped or pruned into any reasonable or even unreasonable form, I would prefer the Irish yew, and make the head of the rose stand high enough to bloom above the yew. It is the ordinary system that nature follows to elevate the panicle or cluster of flowers of a plant above the foliage. By this combination we get rid of the unsightly rose-stake, by effectually hiding it in the thick foliage of the yew, and, instead of a leafless rose, with a long grey switch of a stem tied to round iron or square tree all the winter, we have an elegant evergreen tree, admirably suited to the stiff formal lines of geometrical flower-gardens; and surely a crown of roses, if properly worn, would set off to advantage the staid and sober virtues of the upright yew; neither would it derogate from its dignity thus to become handmaid to the queen of flowers."

The Circle of Fruits.

Are our farmers,—or such of them as have abundant means for this purpose,—supplied with good fruit during the whole twelve months? Is there any one commodity, more calculated to increase the pleasures of the country, and to render home attractive to young people, than fine, ripe, fresh fruit, of one's own raising, during the entire season?

Many have adopted a very erroneous opinion, and suppose the "fruit season" to be a small portion of the year. A good selection would extend the period of actual bearing and ripening in the open air, to nearly six months; and such kinds as possess keeping properties, if in sufficient quantity, would supply the other six. The first fruits ripen, even so far north as Albany and Rochester, by the first day of summer, and two weeks earlier at Philadelphia and New-York. Three varieties of the cherry,—the Early May, May Bigarreau, and Early Purple Guigne,—mature stimultaneously with the Duke of Kent and Large Early Scarlet Strawberries; a host of other fine varieties of both these kinds immediately succeed them. Currants and Raspberries soon join the list, the Primordian plum, the Amire Joannet and Madeleine pears, and several delicious Apricots are on hand by wheat harvest; after which the profusion of peaches, pears, apples, plums, grapes, &c., furnish the richest supplies through autumn. Grapes and pears may be kept till spring, and apples till the succeeding summer. But, let it be remembered, that if the *long-keepers* are not laid in in very liberal quantities, the stores will soon be exhausted. The loss by unavoidable decay, as well as by consumption, must be allowed for. An excellent mode of keeping winter and spring apples, in the absence of a better, was this: "Lock them up in a cool, dry cellar, and hide the key." The error was in the limited supply; its correction, is to supersede the necessity by an abundant store. Every cultivator, therefore, while he plants liberally of the earliest ripening varieties, must plant still more liberally of long keepers; for while the former are soon succeeded by others, the latter must extend their benefits through a long and otherwise dreary period.

The Tree Pœonia.

Among all the fine and newly introduced shrubs, whether tender or hardy, nothing, we believe, will compare with the old Banks' Tree Pœonia. It endures the severest winters of western New-York, without the slightest injury, and will flourish with the most common cultivation in any good soil. From its slow growth several years are required before its full beauty is developed. A plant in the writer's garden, about seven years old, presents in its mass of branches and foliage a hemispherical form, and is about three feet high and five feet in horizontal diameter; and during the flowering season the present year, bore seventy flowers, all in bloom together, densely double, and varying each from five to six inches in diameter.

LARGE PEACHES.—The Ohio Cultivator states that very large peaches were exhibited at the Fair of the Columbus Horticultural Society, one measuring a foot in circumference [about 4 inches through,] and weighing 14 ounces. We believe the largest peach on authentic record, is that stated on the authority of George Lindley, in his "Guide to the Orchard," which was 14 inches in circumference. It had received the highest culture on a wall.

Fall Transplanting.

Persons of limited experience differ in their opinions, as to the relative advantage of spring and fall for transplanting trees, while the most experienced fruit growers prefer the fall for all hardy kinds.

Some believe that the apple, pear, plum, &c., can be moved with the least injury in the fall; while the peach and apricot will succeed best in the spring. Mr. Downing says, in relation to the peach,—"North of New-York, it is better always to make plantations in the spring. South of that limit, it may usually be done with equal advantage in autumn."

My experience has confirmed me in the opinion, that in our latitude fall planting for the peach is better than spring, if set on dry ground; and they should be placed on no other.

On the 5th, 6th, 8th, and 9th of November last, I set in the orchard one thousand five hundred, worked on budded peach trees; and now, on examining them, find that all are alive but ten; the trees are not only alive, but are making a good growth, so that the rows can be seen half a mile.

I have six hundred peach trees, which have been in the orchard from three to five years, the most of which were transplanted in the fall, with success equal to those set last autumn.

The manner of preparing the ground, and treatment of those set last fall, has been as follows: The field was sowed to buckwheat last season; after that was harvested, straight furrows were plowed one rod apart; then furrows were run the other way the same distance; where the furrows crossed each other was a mark for a tree, and the plowing assisted in digging the holes. The roots were set no deeper than the plow run; they were hilled up a little more than would be required for spring planting.

Early in the spring they were examined, to see whether all had kept their position, and if the frost had started any during the winter they were attended to. About the middle of June each row was plowed, the same as a row of corn, with a two horse team, having a short whiffletree for the off side horse; two men followed the plow and hoed each tree.

The ground has since been plowed clean and sowed to buckwheat, but none allowed to grow within two feet of the trees.

This field occupies a high and bleak position; front being a level eminence, the balance sloping north and west. E. C. Frost. *Seneca Lake, Highland Nurseries, Catharine, Aug. 1st,* 1848.

Raising Pear Trees From Seed.

A series of questions in regard to raising pear stocks having appeared in the *Massachusetts Plowman*, they were answered in a very judicious and clear manner by James W. Russell, of Nelson, N. H. The questions and answers are as follows:

1st. What kind of soil suits the pear seedling the best?

Ans. A deep mellow loam from 18 in. to 2 ft. deep on *clay* or hard pan bottom.

2d. What kind of manure is best?

Ans. Compost manure that has been thoroughly worked, until it has in some measure the appearance of an ash heap.

3d. When is the best time for sowing the seed?

Ans. November, as late in the month as the ground can be worked.

4th. What kind of pears are best for seed?

Ans. The wild or Perry pear.

5th. How long time should they be allowed to grow in the seed-bed before they are transplanted?

Ans. Sixteen months from the time of sowing the seed, or plant out into Nursery Rows as early in the spring as the ground can be worked.

6th. Is not the tap root essential to a vigorous growth of the young stock the first year?

Ans. Yes, it is.

7th. Should they be allowed to remain in the ground without being taken up the first year? If so, what is the best way to protect them from frost?

Ans. By mulching with horse manure 3 or 4 inches thick amongst the plants.

8th. Is there any remedy for the blasts which strikes the leaves during summer, thereby stopping the growth of the young tree at once?

Ans. Great depth of soil, and a slight mulching when the drouth commences.

9th. What is the best method of destroying the lice which feed upon the young stock, and check its growth while they remain, if not for the remaining part of the season?

Ans. A strong decoction of tobacco-water, with a small portion of urine from the cow mixed with it; the young stocks must be *immersed* in this fluid. It will be seen that a wide and shallow vessel will be needed for this purpose to hold the wash; from three to six of the young stocks may be *immersed* at once. It should be remembered that a cloudy day, or to commence *three hours* before sunset, should be the preferred time to perform this important business.

10th. Finally, how should the soil be best prepared for the growth of the young stock?

Ans. By trenching the ground two feet deep, and by digging in a bountiful dressing of the aforesaid compost manure, before the sowing of the seed and before transplanting the stocks into Nursery Rows.

Finally, by keeping the ground clear of weeds, and frequent hoeing through the season, the cultivator may have every reason to expect that his labors will be crowned with success.

Tongue or Splice Grafting.

Editors of the Cultivator—I notice the mode of grafting small trees pointed out by E. M. Hoyt, (pp. 214, 215,) in the July No. of your paper.

I would suggest as an improvement upon this mode, a plan which I have practiced with success, (and which I believe is common among nurserymen,) that of making a split in both stock and scion, and dovetailing, as it were, the two together, taking care always that there shall be a meeting of the inner bark of the stock and scion on one side at least; then wind round soft basswood matting, to keep the scion in place, and covering the parts with grafting wax or grafting clay, applied over the matting to exclude the air.

The superiority of this mode, commonly called tongue or splice grafting, consists in the support afforded by the tongue, (or the dovetailing of the parts,) to the scion; it is much less liable to get displaced, in applying the covering to protect the parts from the air, than the mode practiced by Mr. Hoyt This mode of tongue-grafting, is performed by many upon small trees, without putting any bandage round the parts; but in this case, the stock is usually cut below the surface of the soil, the scion is then placed properly upon the stock, and the earth drawn up over the stock, leaving merely the tip of the scion exposed to the air. Nine in ten of the scions thus inserted are sure to live; indeed the work must be done in a very bungling manner, where stock and scion are both in good condition, if there is a failure.

Whip, tongue, or splice grafting, may be performed upon small stocks in the house, as well or better than any where else,—and earlier in the season than it would be comfortable to perform it in the open field.

Suppose for instance you have a hundred seedling pear or apple trees which you wish to work, of the 2d or third years' growth. The stocks will be from the size of a goose-quill up to about half an inch in diameter.

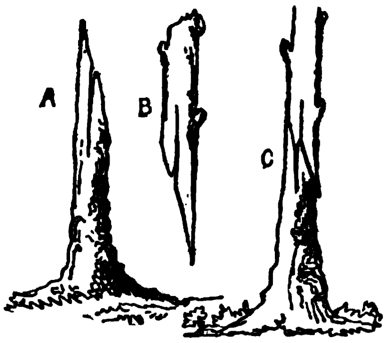
The stocks, if not already in the cellar, may be carefully raised from the ground and brought into the cellar, and the roots covered either with earth, sand, or moss, to keep them moist; a dozen or so of the stocks may be brought from the cellar to the operating room, which grafted, bandages and wax or clay applied, and then returned to the cellar again, to be set out in the nursery or wherever else wanted at a convenient season, taking care that the roots do not become dry by a continued exposure to the air. Should the operator be short of stocks for his scions, he may work his grafts upon pieces of the roots of the same kind of trees as the scions; that is, apple scions upon apple roots, pear scions upon pear roots, and never fear for the result; the labor is little, the success almost certain; I have tried it and speak somewhat from experience. Again, suppose the operator to be where choice fruit is found in the autumn, he may cut scions then and preserve them through the winter in his cellar, by setting the ends in sand, and graft in the spring.

I, in one instance, cut scions in October some forty miles from home, carried them home in my valise, preserved them in sand through the winter, and set them the next spring; the scions are now growing and doing well.

Some are fastidious about the covering they place around the stock and scions in grafting. I have tried grafting wax and grafting clay, prepared in various ways, and have not been able to discover any essential difference in the growth of scions and health of the stock, whether wax or clay was the covering material; of the two, I prefer wax, as being neater and more convenient to use. Grafting in orchards is best performed by two hands at least; one prepares the limbs, smooths the ends after the cut of the saw, and applies the wax after the scions are set; the other prepares and sets the scions, and also aids in sawing off the limbs to be grafted on.

The cut accompanying the Hoyt mode of grafting represents a smooth slope of both stock and scion.

This, you will readily perceive is more likely to be displaced than the following or tongued mode.



A. *Stock.* B. *Scion.* C. *The two united.*

Let any one wishing to try this method, first take an apple tree shoot, without reference to having it live; cut it off in a sloping direction, make the splits in the severed parts, and unite them by inserting the tongue of one into the split in the other, two or three trials will give the learner the right idea; always remembering that the slits are to be made in such part as will allow the largest surface of the stock and scion coming in contact at the outer edge of one side, so that the bark and sap-wood of stock and scion may come in contact on one side at least; I say one side, because the stock may be larger than the scion, and vice versa.
W. N. Green. *Worcester, Mass., July* 10, 1848.

Profits of the Strawberry Culture.

Mr. D. D. T. Moore, of Watervliet has about an acre of ground which has been planted to strawberries three years. He paid sixty dollars for the land, it being a part of a farm which he purchased at that price per acre. The strawberries have paid for the land, and leave a nett profit of nearly $200. The past season, the strawberry ground has not been as productive as usual—it yielded 4,000 baskets, (three baskets to the quart,) and brought in the aggregate about $150. Mr. M. thinks it would render the strawberry culture in this vicinity more profitable if more persons would engage in it. The reason he gives for this opinion is, that those who buy and sell strawberries in the Albany and Troy markets, now oblige the producers in this neighborhood to sell at their prices. They do this by sending their agents through the New-York markets, after the sales for the city are principally closed for the day, and buying up such as are left at low prices—then making the producers here submit to corresponding prices, they control the markets. Mr. M. states that from 100 to 150 dollars' worth per day are brought here from New-York during the strawberry season. There should be enough raised here to establish prices, independent of the dealers who only purchase to sell again.

Fumigating Plum Trees.

In the notice of a late horticultural meeting at Zanesville, Ohio, (reported in the *Gazette*,) it is stated that Caleb Hall presented fine specimens of plums, of which he has this year a good crop. He was formerly much annoyed by the curculio, but "in 1845 he fumigated his trees with brimstone, and repeated the operation in 1846, and both those years had good crops; for besides what his family used, he sold in market about $20 worth per annum. In 1847 he did not use the brimstone, and did not, to use his own words 'get enough to make a pie.' In 1848, he again used the brimstone and has a fine crop. He says he gives the naked fact, without saying how far it may be made a perfect remedy for the evil." We know friend Hall to be a careful and intelligent cultivator. Will he be so good as to furnish us with the particulars in regard to this matter? stating how often the trees were smoked, &c.

Expelling the Curculio.—The Cultivator contains directions to destroy or repel the Curculio, that pest to choice fruit. The method I pursue to destroy them, is effectual and simple. At the time the fruit is liable to injury from attacks of the curculio, I shake the trees violently during heavy showers, and catch them in my umbrella, or they are beaten to the ground to be drowned or picked up by the poultry. When timely showers do not occur, I make a blaze of straw or shavings in a kettle, after dark, then shake the trees and disturb or destroy them in that way. A. B.
Rightstown, Pa., June, 1848.

Influence of the Graft.—Dr. Kirtland says, "a graft of the Green Newtown Pippin will invariably render the *bark* rough and black, (the habit of the variety,) within three years after its insertion.

Changing the bearing year of an Apple tree. R. Manning of Salem, with several hours' labor, cut off all the blossoms from a Baldwin apple tree, in the spring of its bearing year. The consequence was, the bearing year was completely changed, the bearing years have become fruitful, and vice versa.

The Nursery Business.

The great increase in the number of nurseries for the raising of fruit trees, within the past few years, shows the attention which the business has drawn to it, as well as the interest in the public generally to procure fruit. Very vague and indefinite are the notions of many respecting it; large numbers engage in it with the belief that it is the sure road to fortune; and others suppose that the prices paid for fruit trees are too high, and that half their money thus expended goes to make the nurseryman rich, and hence this money is grudgingly bestowed, and trees more sparingly planted.

We believe a more general knowledge of the real nature of this business, would be useful in many ways, and prevent disappointment to beginners, and consequently tend to success in cases which are now accompanied with failure. Many have noticed the great benefit which has been derived in those parts of the country where nurseries were early established, in the number and quantity of fine fruits which now exist. The successful establishment of nurseries, becomes therefore, a public benefit; and it can hardly fail to be useful to point out to those engaging in the business, the costs as well as the profits which are to be expected.

A brief estimate of the cost of raising a nursery of ten acres, may assist in placing the business in its true light. Nearly all nurseries of much size or character in this State are near cities,—because they are found most profitable in such localities,—where land costs from $300 to 500 per acre, the yearly interest on which would be $21 to $35 per acre, and the rent not less. Taking $28 as the average, the rent of ten acres would be $280 per annum. To keep a nursery of this size in *proper order*, at least four hands on an average, and one horse would be required; with board and feed, the right sort could not be had for less than $750. The materials to stock such a nursery would vary greatly with its character and with circumstances; but we will call it $500.* To manure and drain the land properly, and bring it to a suitable condition, could not be less than $50 per acre. Advertising, printing catalogues, procuring tools, materials for packing trees, &c., would be $100 per year. The yearly cost of seeds and collecting stocks, &c., might vary from $50 to $1,000, according to circumstances, or the enterprize of the nurseryman, but we will call it $200. There are many other items of a smaller nature which we do not take into account. The whole cost, therefore, of a ten acre nursery for five years, the average growth of saleable trees, would be as follows:—

Rent $280×5 years with interest,		$1611
Labor, 750×5 years,	3750	
Interest,	565	
		4310
Stock, $500, with interest,		701
Manure, &c., 500 with interest,		701
Printing, tools, &c.,	500	
Interest,	77	
		577
Seeds, stocks, &c.,	1000	
Interest,	322	
		1322
Total cost in 5 years,		$9222

Or $1844 per year.

In computing, compound interest is reckoned, and when the entire outlay was at the beginning, the interest on the whole is taken: where yearly expenses are estimated, interest on the successively accumulating sum only, is allowed. The aggregate cost would be less where land is cheaper, but the profits in such cases, from a want of facilities, would be reduced still lower.

To estimate the actual value of such a nursery would be nearly impossible. The accidents which befal young trees are so numerous, that to say how many may become actually fine saleable trees, would be entirely conjectural. Many failures occur,—sometimes thousands are killed in a single winter by the heaving of the soil—or by severe or unusual winters—or by freezing of the inserted bud—or by breaking down under deep snow—or by drying of the grafts—by severe drouth—by ungenial soil—or by all these causes more or less combined. We have known different nurserymen expend hundreds, and in some cases thousands of dollars in attempting to raise certain kinds of trees, on land naturally unsuited to them, though highly manured, without receiving ten per cent on the outlay; we have known the value of thousands of dollars destroyed in one winter by frost in a single nursery; we have seen young and tender trees perish by tens of thousands in the excessive drouth of a summer. The facilities for disposing of trees, also, are greatly influenced by circumstances. Sometimes the demand for a particular variety may be great; in a few years it may become unsaleable, or be eclipsed by others not always better, and large sacrifices result from such overstocked market. Large deductions must often be made to agents, for it rarely happens that a nurseryman is able to dispose of his entire stock at full retail prices.

We have already shown that a ten-acre nursery, if properly conducted, costs nearly $1,000 a year—taking every thing into account, it would probably exceed this sum. The profits must come from one-fifth, or two and a-half acres yearly average. The superintendent or proprietor of such a nursery, who is his own salesman, bookkeeper, clerk, traveller, and general manager, would hardly expect less than five hundred dollars per year for his services; especially if from this amount he had to pay house rent, and furnish his family (if he has one) with food, clothing and fuel, to say nothing of paying doctors' bills. Twenty-five hundred dollars must come yearly from two and a-half acres; and when it is remembered that, in usual practice, not half the trees planted ever attain a marketable appearance, and that there are in fact often not more than one thousand good trees on two and a-half acres, which at this rate would have to be sold at twenty-five cents each, as an average,—it will be perceived that the present prices of trees cannot be much reduced except at a loss. Extreme cases occasionally occur of a much greater amount of good trees per acre; but formidable losses also occur, greatly reducing the average. In conclusion, it may be therefore remarked, that this, like all other kinds of business, requiring judgment, activity, vigilance and intelligence, may if industriously pursued, afford a return for the labor bestowed. We have known a few men who have thus accumulated comfortable estates—we have known a larger number who have either lost or become insolvent—and a still larger number who have just succeeded in making a living.

The question often arises, whether the farmer can most cheaply raise his own trees or purchase them. If he has some knowledge of the business, trees of good varieties to propagate, and considerable leisure, he may easily raise them, otherwise not. Whatever is done by wholesale, is usually most cheaply done; and this is especially the case where new varieties are to be introduced. The nurseryman may procure such, and furnish a hundred or a thousand, at a lower rate than an amateur could procure it from the same source, and raise but a single tree.

ERRATUM.—p. 217, line 3d from bottom of 2d column, for "Eastern pippin," read *Easter Pippin*.

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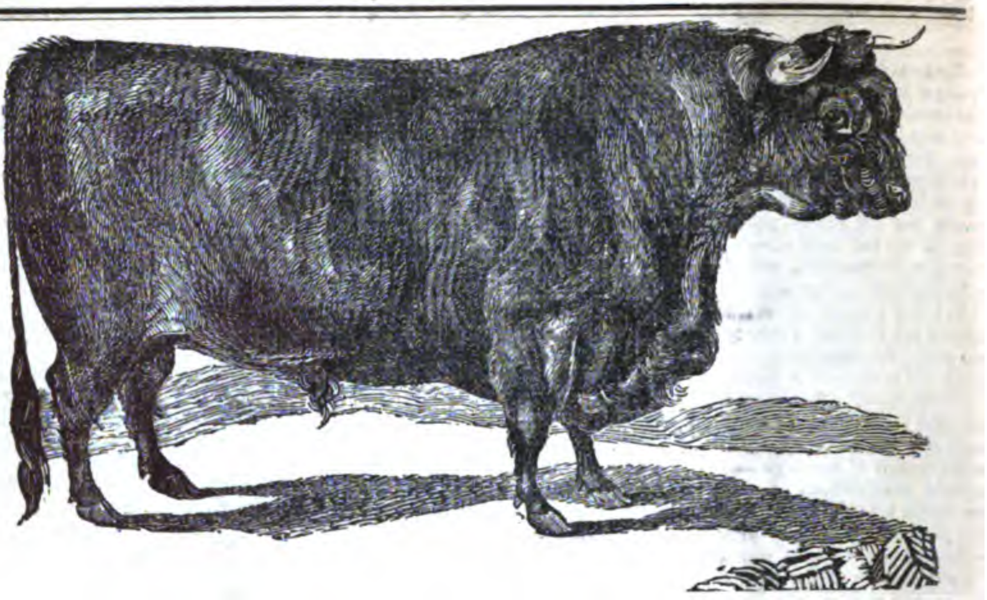
* The constant renewals, and procuring new varieties, &c., would about renew this amount by the end of the first five or six years, when the first stock of trees will be sold out.



WEST HIGHLAND CATTLE.

It is by no means uncommon to hear some of our domestic animals spoken of as belonging to "*native breeds;*" and from the little consideration which is usually given to the subject, it is not improbable that some people have lost sight of the fact that all these animals, (including poultry, with the exception of turkeys,) were introduced into America from the Old World.

True, we have two indigenous species of the ox, the Buffalo or Bison, and the Musk Ox; and also a wild species of sheep, (the American argali, or Rocky Mountain Sheep,) but all these are specifically different from our domestic races.

Only about three centuries and a-half have elapsed since the first permanent settlement of this country was established by Europeans, and it is but little more than two centuries since our forefathers planted themselves on the territory which we occupy. It is obvious, therefore, that our horses, cattle, sheep, swine, &c., have been disseminated here within the period alluded to—the parent animals having been introduced at various times.

The numerous herds of cattle and horses which roam over the vast plains of South America, were derived from domestic stocks brought by the Spaniards from their native country, and turned loose to subsist and propagate their species, in a great degree uncontrolled by man. The small, half-wild ponies occasionally seen on our western prairies, and the ponies in the possession of our Indian tribes, are the descendants of animals derived from the French colonists in Canada, or from the Spanish settlements at the South.

In the English settlements, the cattle, as well as most of the other domestic animals, were brought chiefly from the British Islands. The inquiry has often been made—to what variety the common cattle of our country originally belonged? It is not easy to answer the question. There were probably importations of various stocks, though we have no authentic account or description of them. The heterogeneous character of our common cattle has led to the idea that the progenitors were not selected with much regard to purity of blood or similarity of points; but it must be admitted that they have generally been bred in so careless and indiscriminate a manner, that they would not be likely to make any approach towards a standard of uniformity. An exception should, perhaps, be made in reference to some parts of New England, where the original stock is believed to have been obtained chiefly from Devonshire and Sussex, and has assumed more nearly the appearance of a distinct breed than the general stock of the country.

It was not, however, till the middle of the last century that any systematic attempts were made to improve the breeds of British cattle; and as the importations of stock to this country for the purpose of effecting improvement, have been made since that period, it is comparatively easy to ascertain the varieties from which they were taken.

It may be proper to observe that the present breeds of British cattle are arranged in four general divisions: viz., Long-Horns, Middle-Horns, Polled Cattle and Short-Horns, exclusive of the Alderneys. These are subdivided into many varieties, each having its distinctive name. Thus, among the Middle-Horns we have the Devon, Hereford, Sussex, and several Scotch and Welsh breeds; among the Long-Horns we have the Bakewell, Lancashire and Irish; and among the Short-Horns, the Yorkshire, Durham, &c.

Within the last sixty years, we have had importations of several families of Short-Horns, and Long-Horns, together with Herefords, Devons, Ayrshires and Alderneys. These breeds, for the particular purposes and localities for which each is adapted, have succeeded well, and have been of great advantage. But considering the great extent of our country, and the great variety of climate and surface which it embraces, the inquiry is presented, whether there are not breeds which have never been introduced here, that would be better suited to some sections than any we have yet obtained? We allude particularly to those parts of the country in which animals are required to endure considerable exposure, and to obtain their subsistence from rough or sterile grounds. Our northern districts, including a large portion of New-England, New-York, and the Canadas, and all the mountain ranges from thence to Georgia. are of this character.

In reference to the question—what would be the best and most profitable cattle for these sections. we beg leave to call attention to the characteristics of the West Highland breed of Scotland, as described by various authors. It may be observed in the outset, that they belong to the primary division of Middle-Horns.

MARTIN, in his late work on the Ox, says:—"Turning to Scotland, it may be observed that from the remotest times, this land of heath and mountain has been the nursery of an original breed or race of black cattle, of wild aspect, of beautiful symmetry, and though small, yet vigorous and hardy; patient of hunger and cold, and rapidly fattening on tolerable land."

There are several varieties of cattle in Scotland, but those of the Hebrides or Western Islands, commonly called *Kyloes* or West Highlanders, are considered most pure. Mr. MARTIN speaks of this breed as follows:

"Change the color from black to white, and there is little difference between a beautiful Kyloe from Arran, Islay, or the Isle of Skye, and one of the wild cattle of Chillingham; if we may venture an opinion, they display more nearly than any other breed, the characters of the mountain cattle of our island when invaded by Cæsar. We say the mountain cattle, because we suspect that a larger and heavier race [the Long-Horns] even then tenanted the swampy plains and low grounds of many portions of the country."

He thus gives the points of these cattle:—"In a well bred Kyloe, the following characters are conspicuous: The head is small and short, with a fine and somewhat upturned muzzle; the forehead is broad; the horns wide apart at their base, tapering, and of a waxen yellow: the neck is fine at its junction with the head, arched above, and abruptly descending to the breast, which is broad, full and very prominent; the shoulders are deep and broad, and the chine is well filled, so as to leave no depression behind them; the limbs are short and muscular, with moderate bone; the back is straight and broad; the ribs boldly arched and brought well up to the hips; the chest deep and voluminous; the tail high set, and largely tufted at the tip; the coat of hair thick and black: such is the bull. The ox differs in proportion. The cow is far more slightly built, and her general contour is more elongated. Although, as we have said, black is the ordinary or standard coloe of the kyloe, many are of a reddish brown and so mr are of a pale or whitish dun."

The descriptions of this stock by Low, YOUATT, and others, are of a similar character, with the addition that their beef is stated to be of the finest quality, commanding the highest price in every market where it is known. Their milk, though not afforded in great abundance, is of extraordinary richness, and the butter and cheese from it is highly esteemed for its superior flavor. —PITT, in his "Survey of Leicestershire," states that the late Mr. BAKEWELL made a trial with three cows; a Yorkshire Short-horn, a Scot, and one of his own improved Long-horn, or Dishly breed. The result was that the Short-horn ate much the most food and gave the largest quantity of milk; the Scot made *most butter;* and the Dishly gave least milk, but increased most in weight.

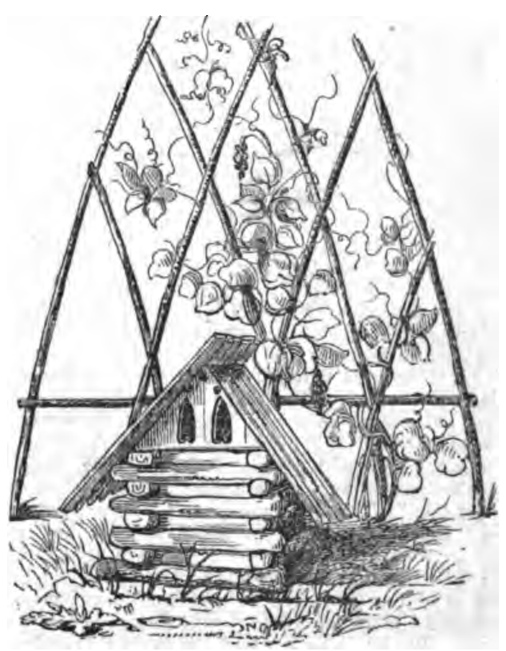
The late JOHN PRICE, Esq. of Poole House, Worcestershire, England, a distinguished breeder of Hereford cattle, stated in a communication to the *Farmer's Magazine*, (vol. iii, new series, pp. 49, 50,) that he deemed the West Highland Scots to approach more nearly than any other breed, the standard of form which he considered the true one, and he therefore decided in the outset on adopting them as his "model." He was still more induced to this course from a conviction that they "had remained longer than any other breed in the place where they were first located, and were more free from intermixture with others." For his soil, he wished an animal somewhat larger than the West Highlanders, and he chose the Herefords as coming nearest his model of any having the requisite size.

C. HILLIARD, in his "*Practical Farming and Grazing*," says—"The West Highlanders are as perfect in their form as any cattle upon the face of the earth."

The size of the Kyloes or West Highlanders varies somewhat, according to the locality. The nett weight of those from the Isle of Skye and Islay, is said to be from 500 to 800 pounds, the four quarters, at four to five years old. The Argyle variety is considerably heavier. Mr. MARTIN says—"In Argyleshire they are larger than in the Hebrides, and many of them are models of beauty—pictures of a noble, semi-wild race; descendants of the old mountain breed, which once roamed in the wilds of Caledonia, and came crushing the forests to meet the fierce hunter."

Now are not the qualities possessed by these Highland cattle, precisely such as would adapt them to those parts of our country of which we have spoken? We think so, and are confident in the opinion that the introduction of this breed, and their relatives, the Galloways, would be a decided acquisition. We would, therefore, recommend the subject to the attention of our able agricultural societies, wealthy land-holders and other enterprising and public-spirited individuals, through whose influence and exertions we hope to see the stock introduced and submitted to a fair trial.

The figure at the head of this article is that of a West Highland bull, bred by Mr. GRANT, of Banffshire, Scotland, which received the highest prize in his class, at the show of the Highland Agricultural Society, in 1840.



Rustic Hencoop.

The above is a sketch of a rustic hencoop and trellis, taken from one in Mr. Arden's garden in Putnam county. It is very simple and easily constructed. The Hen coop is a log cabin on a small scale, with the eaves of the roof projecting, and the door immediately under the eaves. The trellace is to be made of cedar poles with the bark left on and crossed as in the drawing. Plant a vine to partially cover it, and it will be found very ornamental. Trellis 10 feet high. A SUBSCRIBER.

THE FARMER'S NOTE BOOK.

Scotch and American Plows.

In the *Cultivator* for April, page 108, your correspondent, W. of Lenox, Mass., delineated both the Scotch and American plows, and attempted to show the superiority of the former over the best specimens of the latter, and he arrives at the conclusion, that wherever first rate plowing or thorough tillage is required, " the Scottish plow or some analogous instrument must be used." But I am not quite prepared to see so much skill and labor as has been expended on the American plow, consigned so suddenly to oblivion, believing as I do that our *best* plows are not excelled by any other whatever. Before we can determine what constitutes a good plow, we must know what work the plow is to perform—the dimensions the furrow-slice should possess. And here it may be well to remark, that the same plow may be so adjusted, as to plow deep or shallow and make work equally good, but cannot be made to turn furrows of *widths* materially different and do each in the same perfection. And when we see contrivances for turning the plow to the right or left, it reminds one of an almanac published not long since, and calculated for a certain meridian, but would " answer for all places adjoining."

Every plowman knows, that a plow will do the best work in turning a furrow about as wide as the extremity of the wing of the share. The question now arises, what width of furrow is it most profitable to plow at present in this country ?*

We are in the habit of frequently referring to the European modes of farming, and some are ready to adopt many of the practices of that country, without considering whether they are adapted to our circumstances. Owing to the difference in the prices of land and labor, a system of farming that is profitable in one country would be ruinous in the other. Thus spade husbandry in some parts of Europe is extensively practiced, but for reasons already stated, would not answer here. On the same principle, the furrow slice may be so narrow that the extra product, if any, would not pay for the extra amount of labor expended. Some writers in this country have recommended that the furrow-slice be not more than six inches wide, but in practice it is believed that not one farmer in a hundred plows less than 9 or 10 inches wide, and in light soils, some still wider. And it is inferred that ten inches is the width that " W." plows, for he says, speaking of his Scotch plow with a wing six inches wide, that it does not cut the furrow much more than half off on the under side." This being the case, it is no wonder that his " plowman received no premium," for however fair the work might appear on the surface, it is probable the committee examined the under side of the furrow as well as the upper, and could not conscientiously award a premium where so much imperfection was found. But let us for a moment examine the merits of the Scotch Plow, when moving in its appropriate sphere, that is, when turning a furrow only six or seven inches wide. W. says, " its long and twisted mould board raises the slice, pulverises it completely, and leaves it in its place with absolute regularity;" and quoting Colman he says, the "work when done resembles a ruffle just come from a crimping iron." That the work of the Scotch plow when guided by an experienced plowman, appears quite uniform, is not denied. But because a furrow resembles a ruffle just come from a crimping iron, or a brick just come from the mould, does that prove that it is finely pulverized ? Certainly not; on the contrary such appearance would indicate that it had not been broken at all.

Let it not be said that I would advocate a retrograde movement, that I would have a furrow less perfect, but the perfection to be preferred is not the perfection of appearance merely, but that of utility. The furrow should be drawn in a straight line, should be of uniform width and thickness, but when inverted, the surface should be somewhat convex, and be full of crevices, some of them perhaps, half an inch in width; this would indicate that it had been finely pulverised. And this is precisely the situation in which some of our best American plows leave it, and when left in this way, the land remains light and lively a much longer time than it otherwise would.

It is admitted that in very strong ground, the Scotch plow, on account of its great weight, is less liable to be thrown out than the American, but there are comparatively but few sections of country where it will be necessary to use them on that account. Do not these figures on the page referred to, need to be explained ! They were made it is said, " in order to give at a glance, the comparative proportions and size of each kind of plow."

It will be seen that the distance, as there represented, from the point of the share up to the under side of the beam, in the Scotch plow, is about double to that of the American. By measurement, I find the distance in the American plow that I use, to be fifteen inches, and I have never seen a Scotch plow, (and I have seen several,) in which the distance was 30 inches. Besides, there is usually in the Scotch plow, a draught-rod* some 3 or 4 inches below the beam, which has the same tendency to cause the plow to clog, as if the beam itself were in that place. W. says, truly, that the wing of the share is usually 10 inches wide in the American plow, and not over 6 inches in the iron one. But in the figures there given of the underside of each, the wing of the Scotch plow is $\frac{1}{4}$ of an inch in width, and of the American $\frac{5}{8}$. By what rule in arithmetic he can make this the same proportion as six to ten, I confess I am not able to discover.† Your correspondent thinks, that in order to move the Scotch plow, our farmers must procure much more powerful animals than they at present employ. It is quite probable that some who use the American plow, have as good teams as those who use the other kind,—but they may not care to tax them to the full extent of their ability in the daily operations of the farm, and this, where considerable plowing is to be done, is an important consideration.

It is not surprising that among the almost endless variety of American plows, there should be some comparatively worthless; but there exists no necessity for so many kinds, for a plow that will turn a furrow of given dimensions with the greatest ease to the team in one kind of soil, is usually best to turn a furrow *of the same dimensions* in other kinds. H. C. B. *New-Lisbon, N. Y.*, 1848.

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* This question seems to imply that some special width of furrow would be proper for "this country." We do not think the case admits of any specific rule. The width of furrow should be varied with the nature of the soil and the purpose to be accomplished. On some soils, already too light, it might be expedient to make furrows twelve to fourteen inches wide; while to render others of a compact nature, sufficiently open and pliable, it would be best to plow not more than half that width.—Eds.

* Scotch plows are sometimes used with draft-rods, but in those we have seen, the rod is by no means "usual."—Eds.

† The figures given by our correspondent W., we do not understand to have been drawn with mathematical accuracy, or to correspond *precisely* to the relative proportions of the plows represented; but were designed to give a general idea of their form.—Eds.

Good Butter.

The articles recently published in the Cultivator, on the subject of butter for the United States navy, are attracting the attention they deserve, and leading to inquiries and investigations which will result in eliciting truth and correcting erroneous opinions. The Secretary of the New-York State Agricultural Society is entitled to high commendation for the interest he has manifested in acquiring important information, and publishing it for the benefit of community.

The prejudice against butter, which is not marked "Goshen" or "Orange County," is passing away, and the dairymen of Chenango, Delaware and other counties have obtained a high reputation for the quality of their butter.

A Chenango farmer is now a contractor with the government for the delivery of ten thousand pounds of butter annually for the use of the navy. Last October he delivered the whole quantity—the produce of his own farm—at the navy yard in Brooklyn, in firkins of eighty pounds each. It passed the usual *rigid inspection*, and not one firkin was condemned. This instance is mentioned in confirmation of your remark, in the July number of the Cultivator, that other counties besides Orange produce excellent butter. I have another object in mentioning it, which is to stimulate our farmers by this example to exertion, and to the application of the requisite skill and attention to the manufacture of butter. The hills of Chenango afford the finest pasturage, and the purest spring water in abundance. Without these, good butter cannot be made. With them, no poor butter should be made. The rules to be observed in the manufacture are few and easily understood. The necessity—the absolute necessity of adhering to them, cannot be too strongly enforced.

Oxford, N. Y., July, 1848. A. B.

Crops in Illinois and Wisconsin.

A correspondent who signs "A. E.," and dates at Cicero, N. Y., gives us a sketch of some of his observations during a trip through a portion of Illinois, Wisconsin and Michigan. He says:—"From Chicago I went a few hundred miles through the States of Illinois and Wisconsin, mostly by private conveyance, which gave me a fair opportunity of viewing the country; the grain crops here, as in Michigan, were very heavy on the ground, and bid fair to yield an abundant harvest. There is more spring wheat on the ground in Northern Illinois than there is winter wheat; it is considered a much surer crop, and nearly equal in quality. They have recently obtained a new kind of spring wheat called the Hedge-row, which so far answers an excellent purpose. It has a very short head, is hardy and free from all kinds of insects; it gives a good yield and sells for five or six cents only, less on a bushel than winter wheat. The potatoes in Illinois have been injured to some extent by the disease so prevalent in this section, but in north Wisconsin they have as fine potatoes as ever grew. They supply Buffalo and Rochester to a great extent.

The soil of the great prairies in Illinois, is a deep black muck, easy to work and very productive. I saw here in one or two young orchards the locust borer working in the apple-trees—in appearance, the same kind precisely that has destroyed so many locust trees in this section. The people much fear that their young orchards will be ruined. Do you know of any preventive?

Gravel Buildings.—I saw in Wisconsin, some (to me) new constructed buildings, called *Gravel houses*. They take coarse gravel and coarse sand; and they put one bushel of their common lime to 8 or 10 bushels of sand; they take boards about a foot wide, set them on the edge, 10 or 12 inches apart, and fill them up with the gravel and mortar about a foot; then let it dry a day, and so keep on till they get to the height they wish. It makes a good substantial building. At Beloit they have many buildings of this kind, and at Southport they have a large church built in this manner. It is as cheap as any other good mode of building."

Advantages of Forests.

The Hon. Geo. P. Marsh, in his address before the Rutland County Agricultural Society, makes the following excellent observations in regard to the advantages of forests:—

"The functions of the forest, besides supplying timber and fuel, are very various. The conducting powers of trees render them highly useful in restoring the disturbed equilibrium of the electric fluid; they are of great value in sheltering and protecting more tender vegetables against the destructive effects of bleak and parching winds, and the annual deposit of the foliage of deciduous trees, and the decomposition of their decaying trunks, form an accumulation of vegetable mould, which gives the greatest fertility to the often originally barren soils on which they grow, and enriches lower grounds by the wash from rains and the melting snows.

"The inconveniences resulting from a want of foresight in the economy of the forest, are already severely felt in many parts of New-England, and even in some of the older towns in Vermont. Steep side hills and rocky ledges are well suited to the permanent growth of wood, but when in the rage for improvement they are improvidently stripped of this protection, the action of sun and wind and rain soon deprives them of their thin coating of vegetable mould, and this, when exhausted, cannot be restored by ordinary husbandry. They remain, therefore, barren and unsightly blots, producing neither grain nor grass, and yielding no crop but a harvest of noxious weeds, to infest with their scattered seeds the richer arable grounds below. But this is by no means the only evil resulting from the injudicious destruction of the woods. Forests serve as reservoirs and equalizers of humidity. In wet seasons, the decayed leaves and spongy soil of wood lands retain a large proportion of the falling rains, and give back the moisture in time of drouth, by evaporation or through the medium of springs. They thus both check the sudden flow of water from the surface into the streams and low grounds, and prevent the drouths of summer from parching our pastures and drying up the rivulets which water them. On the other hand, where too large a proportion of the surface is bared of wood, the action of the summer sun and wind scorches the hills which are no longer shaded or sheltered by trees, the springs and rivulets that found their supply in the bibulous soil of the forest disappear, and the farmer is obliged to surrender his meadows to his cattle, which can no longer find food in his pastures, and sometimes even to drive them miles for water. Again, the vernal and autumnal rains, and the melting snows of winter, no longer intercepted and absorbed by the leaves or the open soil of the woods, but falling everywhere upon a comparatively hard and even surface, flow swiftly over the smooth ground, washing away the vegetable mould as they seek their natural outlets, fill every ravine with a torrent, and convert every river into an ocean. The suddenness and violence of our freshets increases in proportion as the soil is cleared; bridges are washed away, meadows swept of their crops and fences, and covered with barren sand, or themselves abraded by the fury of the current, and there is reason to fear that the valleys of many of our streams will soon be converted from smiling meadows into broad wastes of shingle and gravel and pebbles, deserts in summer, and seas in autumn and spring."

The Law of Manures.

We notice that the question—"*Do Manures Ascend or Descend?*" has lately been considerably discussed. For our own part, we should no more think of asking or discussing such a question, than we should whether *moisture* ascends or descends? It obviously does both; and so it is with manures, unless the term manures is to be restricted to *mineral* substances only.

But though we believe that the valuable parts of manures may be both carried into the air and washed into the earth, we do not admit the propriety of some positions, by which the fact is attempted to be illustrated. For instance, it is said—"the *gases* of manure ascend, but the *salts* descend." The fact is here lost sight of, that the same substances are capable, under different circumstances, of assuming both a gaseous and solid form. Such is the case with carbon,—which constitutes the greatest part of ordinary manures, as well as vegetable substances; and also with nitrogen,—which has formerly been held by chemists, (and is, indeed, still held by many chemists,) as the most valuable and important element in manures.

If a heap of manure is left to ferment on the surface of the earth, or without being covered by some absorbing substance, its bulk and weight are greatly reduced. What has become of the lost portion? It has, of course, gone into the air, as it would have done if the manure had been acted on by fire. The manure, or a certain portion of it, has been resolved into its original elements, and the carbon and nitrogen it contained have again become parts of the atmosphere.

The nitrogen in manure is in the form of ammonia, and that it escapes during fermentation, has been proved; it is perceptible by the smell, and has, also, by means of acids, been detected in its ascent. Most people are familiar with ammonia in the form of a salt, and know that in this form it is extremely volatile, and readily passes into an aeriform state. It is also easily soluble in water; and is, therefore, readily washed into the earth by rains. Thus the very substance which forms a salt, may become a gas and ascend into the air; or it may become a liquid and descend into the earth.

Manures may be combined with substances which will prevent the escape of ammonia; such as charcoal, or charcoal-dust from coal-pits, peat, muck, soil, and vegetable or carbonaceous substances generally. If the process of fermentation is properly regulated, and the manure is combined with articles which will absorb the gases as they are disengaged, there will be no waste. It may be considered a rule, that whenever smell is emitted by manures, some of their valuable properties are being dissipated; hence their odors should not be wasted "on the desert air;" they should be saved and converted into vegetable substances, in which condition they are not only more agreeable to the *olfactories*, but become substantial elements of animal nutrition.

As to the *sinking* of manures, there is positive evidence of the fact. We have in many instances seen its effects to the depth of several feet. On the farm of Mr. Prentice, near this city, it was lately noticed, in digging a cellar near where a compost heap had laid, that the earth, to the depth of three feet from the surface, though it was of quite a compact and clayey nature, was so impregnated with the qualities of the manure that they were plainly perceptible. And the effects of manure are always traceable to a greater or less depth, in proportion to the porousness of the soil and the quantity of manure applied. It is Liebig's opinion that the soluble parts of manures, "phosphates, and other salts with alkaline bases," are drawn off, and wasted to a great extent by percolation.*

The depth to which manures should be buried is another subject, which, in connexion with the question, whether they rise or fall, has been much discussed; and some, who believe that manures *always* ascend, have arrived at the conclusion that they should be placed from "a foot to eighteen inches" under ground.

We do not suppose it is practicable to lay down any fixed rule in regard to the covering of manures. Some general principles, however, may form a guide. It is evident that manures can only afford nutriment to plants when they are in a soluble condition. In their application, therefore, the causes which produce solution and decomposition should be regarded. These causes are, principally, heat, air and moisture; though in the elimination and assimilation of food by plants, light and electricity are evidently powerful agents. Most of these principles act with the greatest force *near the surface*.

In some cases, as in dressing grass-lands, we would spread manures on the top of the ground. But in such cases, we would use a well-rotted compost, in which the animal manures had been combined with such substances as would absorb the matters that during fermentation might pass off. The reason why we would prefer, for such a purpose, manure that had passed through the first stages of decomposition in the manner mentioned, is, that it would be more readily soluble, than in a fresher state, and would be immediately available to the crop; while at the same time its fertilizing principles would be so far combined and fixed, as not to be liable to waste.

But the practice of leaving manures *entirely* on the surface, is not, in many cases, the most judicious, for the following reasons: 1. If it is applied in an unfermented state, uncombined with absorbent substances, some of its valuable properties might be lost during decomposition. 2. With hoed crops, fresh or fibrous manures, on the surface of the ground, would be an obstacle, (more or less according to the quantity,) to cultivation. 3. Manures of any kind, or in any state, when left on the surface, might, from being kept too dry, fail to benefit the crop for which they were intended. Let it be recollected that they are only available to plants when in a soluble state; and to be made soluble, they must be kept moist. We would therefore cover manures to such a degree as would secure the advantages and avoid the objections here indicated, and no more.

On tenaceous soils, a *mechanical* effect is sought to be produced by manures; that is, a greater friability of the soil. This purpose is best accomplished by plowing in strawy or fibrous manures in a fresh or unfermented state. This is obviously, however, quite a different thing from the application of manures to *feed a crop*.

Exhibition of the Royal Agricultural Society.

The exhibition of this society, for the present year, was held at York. It commenced on the 11th and closed on the 14th of July. The English papers speak of it as being "the greatest of the ten meetings" which the Society has held. The number of entries for animals was 725, and for implements 1508. The total amount bestowed in prizes was £2,295—($11,475,) of which £245—($1,225) was for implements. The number of animals and implements exhibited was much larger than on any former occasion. On account of the reputation of the district for horses, and for short-horned cattle, it was expected that these would be not only numerous, but of better quality than usual. The *Mark Lane Express* says, however, "in respect to the short-horns, we think we speak the general opinion when we say, they did not come up to the expectations which had been generally formed." The successful competitors for short-horns were, Mr. Keevill of Wiltshire, first, and Mr. Banneman of Lancashire, second premium for bulls, in class 1; Mr. Linton of Yorkshire, and Mr. Crisp of Northumberland, for bulls in class II; for short-horn cows, Mr. J. M. Hopper and Mr. R. Booth, Yorkshire, took the prizes; and for heifers the prizes were taken by Messrs. Booth, Stanhope, Smith and Kirkham. For Herefords, the prize-takers were Messrs. Carpenter, Higgins, Monkhouse, Williams and Aston, for bulls; and for cows and heifers, Messrs. Williams, Aston, Walker and W. F. Hobbs For Devons, the prize-takers were Messrs. Hole, Fouracre, Turner and Pelham for bulls: and for cows and heifers, Messrs. Bond, Fouracre, Turner and Hole. A list of "local prizes was awarded, which were confined to residents of Yorkshire; but the competitors were also allowed to show for any of the "general prizes." In the "local list," the first premium for short-horn bulls was given to Mr. Ambler, and the second to Mr. Thomas Bates. The other premiums on short-horned bulls in this list, were given to Messrs. Linton and Thompson. The local prizes for short-horn cows and heifers, were given to Mr. R. Booth.

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* See Liebig's essay on "Artificial Manures." Cultivator for 1845, page 364.

The Dinner.—A prominent feature of most English assemblages is the dinner. It is here that, on occasions like the one to which we allude, the awards of prizes are declared, speeches are made, and the general objects of the association are discussed. At this meeting about *twelve hundred* persons sat down at one time under a pavillion 140 feet long by 84 wide. Among the company were the most distinguished and influential of the English nobility, with his Royal Highness Prince Albert, and several foreign ministers, among whom was our respected and able representative, Mr. Bancroft, who was honored by a prominent position, and invited by the president to offer a toast, which was given, accompanied by a beautiful and highly-commended speech. We have not room for the whole of this eloquent speech, but cannot forego the inclination to submit the following extract:

"I rejoice," said Mr. Bancroft, "that we live in an age when, of all the trees that are planted in the ground, the husbandman of all lands invokes the choicest blessing of Providence on the tree of peace (cheers;) praying that its root may strike to the very centre of the earth, and that it may be firmly rooted, that its boughs may but rustle in the breeze of the stormiest revolutions (loud and reiterated cheers). It is with this sentiment and this feeling I stand before you to day. The kindness of your president has favored me with a toast; but I do not, in putting myself forward as diplomatist, speak as a privileged spy (laughter.) I can only say that any one who comes, from any quarter of the world, to spy out the nakedness of the land of England, will have to go home again for his pains. He will find nothing but a united people—(loud cheers)—he will see nothing but a nation that loves English liberties, and is determined to maintain and advance them under the influence of judgment and reason, as conducing to the general prospects and public weal (loud cheers.) He will see nothing but society in the finest arch in which the keenest eye can detect no crevice. And I, gentlemen, speaking as an American—I, gentlemen, speaking as a representative of my country tell you that we rejoice in your prosperity (cheers). I should be denounced by my country if I did not utter that sentiment (loud cheers). I tell you that the greatest delight I have had in this my happy visit to this far-famed valley—this wide, rich, vastly extended valley, which has not its rival till you pass the Alps and come upon the valley of Normandy; I tell you the greatest pleasure I have had in this visit is to see that everywhere fruits of your industry are likely to be rewarded—to see everywhere your teeming valleys promise you a redeeming harvest, before which the sorrows of the past year, which I too witnessed, will pass away like the shadow of a summer's cloud (loud and long continued cheering)."

Prince Albert and several noblemen made very sensible and excellent speeches, which are reported in full in the English papers. There were several meetings for the discussion of practical subjects, held during the show, of which we shall give some notice in another place.

Weights of Swine.

I send you the following account of the weights of sixty-two pigs and forty-five grown hogs raised and slaughtered by Mr. Anthony Woodward, of Cream-Ridge, Monmouth county, New-Jersey. Mr. Woodward is a young man, but an intelligent and most successful farmer. His farm consists of about 180 acres, of which he had 34 acres in corn, 34 acres in rye and wheat (principally rye) and 2 acres in potatoes; the remainder being in grass. In addition to the large number of hogs always raised by Mr. W., he usually keeps over one hundred breeding ewes and a considerable number of cows.

The pigs were eight months and two weeks old when slaughtered, and weighed from 112 to 257—averaging 166 pounds each. The grown hogs were 20 months old, and weighed from 220 to 430—averaging 317 lbs. each.

Is not the little state of New-Jersey ahead?

The amount of grain left after fattening the above crop of pork was as follows: of corn 200 bushels; of wheat 90 bushels; of rye 100 bushels; besides 275 bushels of potatoes.

For the correctness of the above statements I pledge myself; the weights having been taken down by my son, from whose memorandum I copied them. W. B. H. *Long Green, Md., July* 8, 1848.

Preservation of Shingles.

In your paper for July, the question is asked, "how can spruce shingles be rendered durable for roofs?"

Immerse them for 48 hours in a weak solution of corrosive sublimate, (Bi-chloride of mercury,)—and they will last longer than any shingles not so prepared, of even the best kinds of wood.

This process is called *Kyanising* after the inventor, John Kyan. Most of the timbers used at the Woolwich Dock Yard, were so prepared 25 years ago, and do not as yet show the slightest decay.

The sleepers used in the Amboy railroad, were Kyanised with a similar result. Its operation is to coagulate the sap, and thus render it insoluble, and consequently imperishable.

The cistern in which the process is conducted, should be guarded from the approach of cattle, as the solution is very poisonous. Jas. J. Mapes. *Newark, N. J., July* 6, 1848.

Lands in Maryland.

There is a vast amount of land here in Baltimore county, which has been exhausted by the culture of tobacco very many years since, and which has been lying out for half a century—a great deal of which may be purchased very cheaply. No land, perhaps, in the world answers so well and so promptly to a little manure as this. I have seen an old field, which was nearly bare of herbage, enclosed and dressed with about two hundred pounds of guano, produce a good crop of wheat. I have such an one this season in oats, upon which I sowed, at the time of sowing my oats, 100 pounds Peruvian guano per acre, and better oats are not often to be seen. You have many enterprising young *married men* who might purchase a farm here, perhaps, who would have to toil at home for many years to do so. They can purchase land at very low prices, and by paying a small part of the purchase money, in many instances get long credit for the balance. There is very little of this land which is not very easily improved, especially the isinglass [micaceous?] soil. Yours, &c., W. B. HAMILTON.

Long Green, Md., July 8, 1848.

Farming in Wisconsin.

A correspondent sends us the following notice of the farm of Dr. RICHARD M. MEIGS, formerly a resident of this city, but now of Waterville, Waukesha county, Wisconsin. "Dr. M.'s farm contains 349¾ acres, of which 60 acres are now in wheat, 8 in oats, 4 in corn, 2 in ruta bagas, 6 in rye, 8 in barley, together with a large garden. Sixty acres have been broken this summer for fall wheat. On purchasing, the land already broken up had been cropped with wheat for six years in succession, and so reduced as to yield scarcely the seed. Dr. M. is known by Albanians as a practical horticulturist, and especially devoted to the raising of the grape—taking premiums for several years at the Albany Co. Hort. Society. He has a few vines from the nursery of John Gott; 190 peach trees from the same gentleman, planted from the pit a year ago last fall, which are now four feet high. Locust trees from Wm. N. Strong, taken from Kane's Walk, in Pearl st., Albany. His orchard, comprising varieties of apples, looks well. The coming year, he will pay more attention to spring crops, and prepare 60 or 80 acres for fall wheat, in addition to what is already under the plow. Wheat is in fine order, and is now being harvested. Barley has been cut. Every kind of spring crops never looked better. His barley and oats have been estimated to exceed 60 bushels to the acre, and by some to attain 70 bushels—all from old land." *July* 18, 1848.

Use of Cotton Cloth in Curing Hay.

[We have been favored by A. A. LAWRENCE, Esq. with the following letter from Col. PIERCE, of Greenland, N. H., one of the largest and most successful farmers in New England. It affords some valuable information. We have formerly known cloth caps for hay used with advantage.—EDS.]

A. A. LAWRENCE, ESQ.—Dear Sir,—I take pleasure in replying to your inquiries about the "Hay Caps" made from your Salmon Falls Sheetings.* They have fully answered my expectations, preserving the hay perfectly, both through long rains and heavy showers; not only saving a great deal of labor in shaking the rain out of the hay, but preserving all its good qualities, especially that agreeable aromatic perfume, which is always lost when much wet.

I am indebted for the hint of this valuable improvement in haymaking, to a piece published in the *Boston Cultivator*, June 5, 1847, extracted from the *Maine Farmer*. Those there described were made of cloth thirty inches wide and were five feet square, which are too small. Those which I have made of your yard-wide sheetings, two yards square, are as near right as can be. The two breadths are sewed together with a stout hem at the ends, the corners turned back about two inches and sewed down strong, leaving a loop through which is run a stout string of the kind called marline, the ends tied so as to make a loop of an inch and a-half in diameter; through each of these is run a stick of eighteen or twenty inches in length into the hay, standing it up to prevent the loops from slipping off; the haycocks should be made higher than usual and the cloth drawn tight.

The cost is about thirty cents each, namely four yds. of sheeting at seven cents and two cents for line and thread; the making, if done at leisure hours in a family, will cost little or nothing.

Upon the whole, with the experience I have had of their usefulness, I would not be without them if the cost was double what it has been. Yours truly, J. W. PIERCE. *Greenland, N. H., August* 3, 1848.

P. S.—I have waited several days to see the result of the last trial of the caps which we put on last Saturday afternoon—the weather at the time being very fine and promising well. We had about 350 cocks in the field; about 100 were not covered; on Monday it rained all day, the next day, the hay that was not covered was opened, dried, and got in at night; that under the caps was left, being safe, to be got in at leisure; which was done the next day with as little labor as that of the day before, though nearly three times the quantity, and in much finer condition—indeed the rain had no effect upon it.

The 30 inch drillings would not answer a good purpose, and I am not certain, if I were going to have more of them, but that I should prefer cloth still wider than your sheetings, but I am perfectly satisfied with what I have.

I have saved my hay three times already, and those which are washed free from starch, answer equally well as when first used.

Management of Hens.

I want information in regard to the best mode of making hens lay eggs. I have about four hundred hens in my yard, and they do not lay as well as they ought. I want instruction as to how the yard should be fixed, and how they ought to be kept, and how to pack eggs to keep them from spoiling. If I can adopt some plan to make the hens lay well, I intend to buy a thousand or two thousand chickens this fall, and buy many eggs the coming spring. You now understand my business, and see the subject upon which I want information. A. J. MEARS. *Hubbard, Ohio, July*, 1848.

We shall be glad to receive the suggestions of any of our experienced correspondents in relation to the above subject. EDS.

Loss in Burning Bones.

I would be glad to know what is the amount of loss in calcining bones. If I am not mistaken, Liebig says none of much consequence to the farmer. Johnston, in his Agricultural Chemistry supposes the loss very great, and in Allen's American Agriculture, burning bones is called a *very wasteful practice.*

If bones from which the oil has not been extracted are thrown into a heap, they readily burn, so that many fall into powder and the rest are easily crushed. If in this process, they really lose nothing very valuable as manure, or if they do not lose more than twenty-five per cent, it would be by far the most economical mode for all farmers, who can collect bones at the ordinary prices given at the bone mills. As regards myself, this may be easily shown—

Cost of bone-dust in Baltimore,......	50 cts. pr. bush.
Bags, freight and drayage to York,..	10 " "
	60

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* The sheetings weigh 2¾ yards to a pound.

Cost of collecting bones, per ton, $7, which will make, when crushed, about 35 bushels, or 20 cts. per bushel; cost of burning and crushing 5 cts. per bushel: 25 cts. per bushel, or rather for what would have been a bushel of crushed without burning, for the bulk is very much reduced in burning, but if the value remains, mere loss of bulk is an advantage.

I have a machine for pounding bones by hand, upon which two hands will pound to the usual fineness, eight bushels a day in dry weather, taking the bones just as collected, boiled and unboiled. This makes them cost about thirty-seven cents a bushel. The price will do, but it is very slow and troublesome compared with burning. If the simple question, *what amount of loss* do bones sustain for agricultural purposes by burning them until they *fall to powder?* could be answered through the columns of the *Cultivator*, I doubt not many would be benefited, and myself among the number. Edward Jessop.

[We would refer our correspondent to the remarks of Prof. Johnston, in the article on the use of bones as manure, in this number. Eds.]

The State Fair at Buffalo.

The Secretary of the Society will be in attendance at the rooms of the officers at the Mansion House, where all applications will be attended to up to the fourth of September. The officers will meet at the rooms mentioned each evening during the fair, where they will be happy to see any of their agricultural friends.

On Monday, the fourth of September, the business office at the show-grounds will be opened, where entries are to be made, and members will receive their badges.

The executive committee will meet Tuesday morning, September 5th, at ten o'clock, in the great tent, on the show-grounds, for the purpose of filling vacancies in adjudgirg committees. Members of committees are desired to be present on the morning of the 5th, and report themselves to the Secretary.

The chamber of the Common Council, Buffalo, a large and spacious room, has been secured for the Pomological Convention, which will meet on Friday the first of September, and continue during the Fair.

For the evening meetings during the Fair, the Lecture room of the Young Men's Association, and the Court-house, have been engaged; and other places will be designated, if necessary. Professor J. P. Norton of Yale College, will deliver an address at one of the evening meetings; and on another evening, Prof. A. H. Stevens, M. D., of New-York, will speak on the subject of the claims of Agriculture on the Treasury of the State. Dr. D. Lee of Rochester, and Rev. J. O. Choules, of New-Bedford, will also give addresses during the meeting of the Society. Several other gentlemen may be expected to speak.

The Railroad Companies will issue tickets to go and return at half the usual fare. They can be obtained at the offices of all the companies, and may probably be had as early as Saturday preceding the Fair. Stock and articles will be carried free, and will be taken at *any time*, on notice to the several companies, so that cars may be ready. Application in relation to transportation by railroad may be made to the following persons:—E. Foster, Jr., Albany; L. R. Sargeant, Troy; G. W. Young, Schenectady. T. M. Francis, Utica; J. B. Burnet, Syracuse; J. M. Sherwood, Auburn; E. J. Burrall, Geneva; Jos. Alleyn, Rochester; E. C. Dibble, Batavia; T. C. Peters, Buffalo.

The various public and boarding houses in Buffalo, have agreed to charge customers, during the Fair, the customary rates only.

American Institute.

The agricultural and horticultural departments of the exhibition of this association for the present year, will be opened on Tuesday, October 3d, at Castle Garden, New-York. Vegetables, fruits and flowers designed for exhibition, must be brought to the rooms and arranged the day previous—(Oct. 2.)

Plowing and spading matches will take place on Thursday, the 5th of October, at White Plains, Westchester county.

The central convention of Fruit-Growers, called by a notice from the committees of the Massachusetts and the Pennsylvania Horticultural Societies, and the committee of Agriculture of the American Institute, will meet at Judson's Hotel, No. 61 Broadway, New-York, on Tuesday the 10th of October, at 10 o'clock, A. M. The objects of the convention are to compare fruits from various localities; to determine synonymes by which the same fruit is known; to compare opinions respecting the value of varieties of fruit now in cultivation; and to elicit and disseminate pomological information. Persons are requested to bring with them to the meeting, different kinds of fruits, carefully packed and labelled, accompanied with memoranda in regard to the soil in which they grew, and facts in regard to their culture.

The cattle show will take place on Wednesday and Thursday, the 11th and 12th of October, at the Washington Drove Yard, on Forty-fourth street, between Fourth and Fifth Avenue. All entries under this head must be made, and pedigrees delivered, on or before Monday Oct. 9th. They may be sent to T. B. Wakeman, Esq., Secretary of the Institute, New-York.

Value of the Potato.

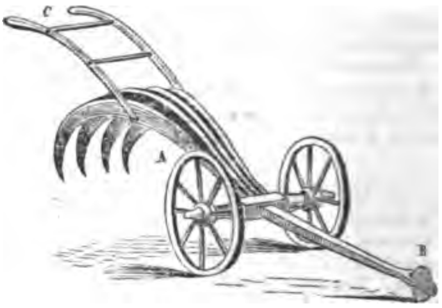
Prof. C. U. Shepard, in his address before the agricultural societies of Hampden and Hampshire counties Mass., made the following excellent remarks in regard to the potato:

"The potato is a vegetable which the rich man knows not how to forego; and one which places the poor man above want. With a shelter from the weather, and one or two acres of ground to plant with this tuber, man may subsist at almost any distance from the miller, the baker, the butcher, and, I may almost add, the doctor. It suits all tastes, flourishes in nearly all climates, and is eminently nutritious and healthful. Its cultivation demands but little labor, and when the earth has ripened the tubers, they are harvested without trouble, and cooked without expense. A few faggots in summer will boil them, and in winter the necessary heat is suppled without expense. There is no waste of time in the processes of milling, sifting, kneading, baking, seasoning, jointing or carving. There is nothing deficient nor superfluous in a well boiled potato. As soon as it is cooked, it opens by chinks, lets fall its thin pellicle upon the platter, and with a little salt, butter or milk, is ready for the unfastidious appetite of the hungry man. Start not back with surprise at the idea of subsisting upon the potato alone, ye who think it necessary to load your tables with all the dainty viands of the market, with fish, flesh and fowl, seasoned with oils and spices, and eaten perhaps with wines,—start not back, I say, with feigned disgust, until you are able to display in your own pampered persons, a fimer muscle, a more beau ideal outline, and a healthier red than the potato-fed peasantry of Ireland and Scotland once showed you, as you passed their cabin doors! No; the chemical physiologist will tell you, that the well-ripened potato, when properly cooked, contains every element that man requires for nutrition; and in the best proportions in which they are found in any plant whatever. There is the abounding supply of starch, for enabling him to maintain the process of breathing, and for generating the necessary warmth of body; there is the nitrogen for contributing to the growth and renovation of organs; the lime and the phosphorus for the bones; and all the salts which a healthy circulation demands. In fine, the potato may well be called the universal plant; and the disease under which it now labors, is an universal calamity. If any agricultural institution should ever be so fortunate as to make us acquainted with the means of controlling it, its name would quickly rank by the side of the proudest universities, and if the great discovery should proceed from a single individual, his name would live when those of the greatest generals and conquerors have become as uncouth and strange to human utterance as their deeds were unfriendly and opposed to human happiness."

Principles of Breeding.

At the late meeting of the Royal Agricultural Society, lectures were given by persons previously appointed, on various subjects connected with agriculture. Discussions of similar subjects were likewise held, at times when the members of the Society were not otherwise engaged. We think the feature a good one, and shall be glad to see it adopted by societies in this country. On the occasion above referred to, Prof. J. F. W. Johnston delivered a lecture on the applications of science to agriculture. Another lecture was given by Professor Simmonds, of the Royal Veterinary College —the general subject, the parturition of cows and sheep; but in his preliminary remarks, he made some valuable observations on the principles of breeding, of which we give the following, from the *Marklane Express:*

"Breeding with a view to improvement, might be said to be founded on nature's established law that like produced like. This was only true in part, for there was a constant tendency to change, arising from a variety of causes; such as domestication, living in a different climate, or on a different kind of food. The management to which animals were subject, had its influence. While those might be looked upon as the chief causes in operation to produce this constant change, at the same time they were means (added to others) which were used to effect an improvement. In order to improve the breed there were two plans, advocated by two sections of practical breeders. One was commonly called the 'in-and-in system,' the other the crossing plan. The in-and-in system originated from Mr. Bakewell, and it had at least the effect of destroying the prejudice which had existed against breeding from animals having a relationship. But the system had a tendency after a time to deteriorate the breed; in fact it might be said to be limited, so far as its benefits were concerned. Every improvement of breed required the application of the same means to retain it which produced it; the chief of these was care in the selection of stock, so as to avoid a tendency to hereditary disease. Crossing was founded on a principal just as secure as Bakewell's principle of care in selection, added to the in-and-in system Certain diseases were hereditary, and so was color, and they could only get rid of this color and this predisposition to disease by crossing. Still this crossing required care in selection. Mr. Simmonds illustrated this peculiar tendency to propagate disease or defects, by referring at some length, to the fact of the large proportion of horses in Yorkshire known as 'roarers.' Animals bred from these 'roarers' had a peculiar susceptibility to the disease, and if one of these Yorkshire horses was exposed to the ordinary causes of disease, the peculiar defect would be found developed, while other horses similarly exposed would escape. What was true with regard to horses is as true in regard to cattle. sheep, and all domesticated animals. The tendency of *like to produce like*, Mr. Simmonds illustrated, by referring to the results of crossing various breeds of cattle, such as Devons with Herefords, both the color and form of the parent animals being thereby altered or modified. In a state of nature the tendency to change was not observed to the same extent as in domesticated animals; therefore in a state of nature degeneration of a thing did not take place to the same extent as among the same breed when domesticated. The lecturer then passed on to remark upon the importance, in crossing animals, of suiting the male to the mind or taste of the female. Some might smile at this notion, but Mr. S. showed, by several facts, the importance of paying attention to this point."



Root Puller.

The above is a root puller as I would propose to construct one. The centre-wheels, A A are light and so placed that the puller balances on their axletree in such a way, that the heaviest part rests on the cast-iron roller B; the man who holds the handles, C, walks through the clearing as if he were plowing; and whenever he meets a shrub or bush which is to be removed, he presses on the handles and the points of the Puller enter the ground behind the roots, while the pulling of the team will lift the whole forepart of the implement up till the desired extraction is accomplished.

I think this an improvement on the common way of dragging the puller about wherever it might be wanted. Alb. C. Richards. *June* 29, 1848.

AUTUMN.

How dear to roam along the sunny hills,
When Autumn spreads her bounties on the plain;
When Industry his garnered treasure fills
With richest stores from fields of ripened grain;
When slow across the fields the pondrous wain,
Deep laden with the yellow ears, is drawn,
While from wide trees that overhang the lane,
The ripe red apples, shaken down at dawn.
Lie scattered thick and far along the level lawn.

The winding rill along the sunny vale
Sings its sweet song to cheer the reaper's heart;
And oft its voice the pensive autumn gale
Will join and cause the rustling leaves to start;
While scores of screaming blackbirds bear their part,
With varied notes. yet full of melody;
And troops of noisy boys, with dog and cart,
Are hasting to the hills with youthful glee,
To shake the clustering nuts from the tall walnut tree.

But soon this beauteous pageantry shall fail,
And every mellow tint of Autumn fade;
A melancholy murmur fills the gale,
And sorrow saddens o'er the yellowing glade;
Through thickening clouds the suns of autumn wade,
And beauty sets upon the hills no more;
The verdure of the wood is prostrate laid,
And soon the Autumn rains begin to pour,
And down the craggy rocks the swelling torrents roar.

Such is the fortune of majestic man!
The leaves of fragrance round his forehead flow,
The laureate wreath, that gales of fortune fan,
For which he climbed so high or stooped so low;
But soon approach the tempest clouds of wo,
To mar the beauty of his brightest deed;
Yet while he mourns his fortune's overthrow,
He looks to heaven for some more glorious meed;
Thus to the autumn winds I tune my Dorick reed. [*Selected.*

Domestic Economy, Recipes, &c.

Yankee Brown Bread.

Two quarts of Indian meal.
Two quarts of rye meal.
Three pints of milk or water.
Two teaspoonfuls of salt.
Half a pint of strong fresh yeast.

Having sifted the rye and Indian meal into a large pan, mix them well together, adding the salt. Boil the milk or water in a sauce-pan, and when scalding hot pour it on the meal, and stir the whole very hard. If too stiff, add a little more warm water. Let it stand till it becomes only of a lukewarm heat, and then stir in the yeast. Knead the mixture into a stiff dough, and knead it long and hard for at least half an hour. Then cover the pan with a thick cloth that has been previously warmed, and set it near the fire to rise. When the dough is quite light, and cracked all over the top, take it out of the pan; divide the mass in half; make it into two loaves; knead each loaf well for ten minutes or more; and then cover and set them again near the fire, for half an hour. By this time have the oven ready, put in the loaves directly, and bake them at least an hour and a half. This bread is considered very wholesome.

Should you find the dough sour, you may rectify it by kneading in a teaspoonful of pearlash, dissolved in a little warm water.—*Selected.*

Small Beer.

The receipt below for making *small Beer* for this hot weather, is too good to remain so little known. If you are disposed to insert it in your paper, you may promote the comfort of your friends and the cause of temperance.

For making 3 gallons of Beer or 1 pail full,—Take
1 quart West India Molasses,
20 drops Oil Spruce,
15 " Oil Wintergreen,
10 " Oil Sassafras,

Fill the pail with hot water—mix them well—let it stand until it has become blood warm—then add one pint yeast—let it remain 10 or 12 hours—bottle it—and in three hours it will be fit for use, and first rate.

Beef-tea—When one pound of beef, free of fat, and separated from the bones, in the finely chopped state in which it is used for beef sausages or mince meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel from the coagulated albumen, and the fibrine, now becoming hard and horny, we obtain an equal weight of the most aromatic soup, of such a strength as cannot be obtained, even by boiling for hours, from a piece of flesh. When mixed with salt, and the other usual additions by which soup is usually seasoned, and tinged somewhat darker by means of roasted onions or burnt sugar, it forms the very best soup which can in any way be prepared from one pound of flesh.—*Liebig.*

Harvest Drink.—Ten gallons of cold water, 1 gallon of molasses, 1 qt. of vinegar, and ½ lb. of ginger, well stirred together, makes a refreshing drink. Try it. Spirituous liquors, are, as they ought to be, almost entirely banished from the harvest field.

Artificial Ice.—It is said that a mixture of four ounces of nitrate of ammonia, and four ounces of subcarbonate of sodium with four ounces of water in a tin vessel, will in three hours produce ten ounces of ice.

To make a Minute Pudding.—Stir flour into boiling milk, to the consistence of a thin hasty pudding, and in fifteen or twenty minutes it will be fit for the table.—Serve with sauce, to suit the taste.

Answers to Inquiries.

"Insect in Wheat."—A. E., Cicero, N. Y. The insect forwarded by you is the Hessian fly, (*cecidomyia destructor*,) in the flax-seed state.

Cutting Straw and Cornstalks.—J. B. For cutting hay and straw we should prefer Hovey's or Stevens's cutter; for cornstalks, if they are to be mashed fine, we should prefer Wheeler's. Prices from $10 to $25, according to size—the latter for horse power.—All kinds can be had at the Abany Agricultural Warehouse.

Peaty Mould.—A. C. R., Walden's Ridge, Tenn. We think the peaty mould you describe could hardly fail to be useful to soil deficient in organic matter, as yours appears to be. The specimen you sent has been examined by Mr. Salisbury, assistant to Dr. Emmons, who finds it to contain in 100 parts,—organic matter 39.80; water, 1170; silex, 40.10; alumina, peroxide of iron, with a trace of phosphates, 4.50; lime, 0.65; magnesia, a trace.

Soiling Cows.—Erie county, N. Y. In answer to the question, which is most profitable, to feed cows in the yard or pasture them, through the summer? we should say that where land is so cheap as it is in your section, it would probably be cheapest to pasture them. As to the next question, which we should prefer for feeding, lucerne or clover? we answer, lucerne—that is, we think lucerne best, but it is not so easily grown on most soils. Unless you have a very rich, deep, loamy soil, it would be safer to try clover. It will require from a half an acre to an acre of land per cow, according to the quality of the soil, and the productiveness of the season.

Patent Office Report for 1847.—G. P. P. One hundred and fifty thousand copies of this report were ordered published by Congress for gratuitous distribution. It is probable copies can be obtained by addressing any Senator or Representative.

Locust-tree Borer.—Addison, N. Y. There are three species of borer which attack the locust-tree. They are sometimes very destructive, and kill many trees which stand in exposed situations. The best prevention of them which we have known, is to set the trees in compact form, making a dense grove of them. We have seldom seen those so situated much injured, except a few of the outside trees. If any one can suggest a better remedy we should be glad to hear it.

Canker-worm.—C. C. H., Cornwallis, N. S. The most common mode of preventing the ravages of this insect is tarring the trees. As they sometimes appear in the fall or early winter, if the weather is favorable, and ascend the trees, where they deposite their eggs which are hatched the ensuing spring, the tarring, to be effectual, must be applied at that season as well as in spring. The tar is injurious to the trees, binding the bark and checking the circulation of the sap; to prevent which it is best to fasten round the tree a belt of old canvass or coarse cloth, first applying to this a coat of clay wash to prevent the tar from striking through, and afterwards tarring on that. The tar should be made soft by adding cheap oil, and should be applied with care every evening just before dusk, as the insects move principally in the night. Circular troughs of lead, in which oil is to be kept, have been contrived to put round the trees; but we are not able to say whether they have been found so useful as to supercede the use of tar. Plowing the ground around trees infested with canker-worms, late in the fall, and thus exposing the insects, many of which are then in the crysalis state, to the action of frost and air, has been found useful.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last from Many Subscribers, W. B. H., J. P. F., A Subscriber, Jas. Mapes, E. M. Cramer, H. C. B., W. R. Smith, Alb. C. Richard, E. C. Frost, Edward Jessup, H. W. S. Cleveland, C. E. G., W., E. A. G.

Books, Pamphlets, &c., have been received as follows: Report of the committee on Agriculture in the House of Representatives, from the writer, the Hon. J. I. Slingerland.—Thompson's Coin Chart Manual, containing 613 fac-similes of gold and silver coins.—Annual Report of the Mahoning County (Ohio) Agricultural Society, from J. M. Edwards.

Potato Disease.—We have received too late for this number, a communication on this subject from C. E. G. He states that the disease has made its appearance in the neighborhood of Utica. It has also appeared in this vicinity, and many other parts of the country; but to what extent it will injure the crop, cannot yet be ascertained. We have seen some lots early planted, that were already more than half destroyed.

Prof J. F. W. Johnston.—We are authorised to state that the Secretary of the N. Y. State Ag. Society has received a letter from Prof. Johnston, in which he says that owing to the pressure of business on his hands at the present time, he has concluded to postpone his contemplated visit to the United States till next year, when he hopes to spend several months among us.

"Honorable Testimony."—The late Elijah Willard, Esq., of Jonesborough, Illinois, a subscriber and correspondent of the Cultivator, directed by his will, that four entire setts of the work—fourteen volumes each—should be purchased and presented to the farmers in the neighborhood, of his late residence. We acknowledge the reception of the order, which has been filled—the volumes being bound in uniform style.

Blue Buckwheat.—Mr. Lotan Smith, of Liberty, Sullivan county, N. Y., has left with us for distribution a sample of grain known by this name. He states that it is a surer crop than common buckwheat, and will make more flour to the bushel—is not injured by hot sun, and can be safely sown by the 20th of June.

Devon Cattle.—The attention of those wanting this valuable kind of stock, is invited to the advertisement of Mr. Cowles, in this number. He has taken great pains in the selection of his breeding animals, and has many good specimens of the breed.

Produce of one Grain.—Mr. Kirtland, of the Cantonment Farm, Greenbush, has left with us a bundle of straws, the product of a single grain of Multicole rye, the present season. There are 124 stalks, with fair heads. The grain came up last spring, and in consequence of standing by itself, and being later than the fall-sown rye of the same kind, it did not fill well; but the number of stalks indicates an astonishing reproductive power.

Fitzgerald's Portable Burr-Stone Mill.—We have lately witnessed the operation of this mill by horse-power. With one of Wheeler's powers, moved by one horse, it ground corn and oats sufficiently fine for "feed," at the rate of from four to five bushels an hour. We saw the same mill tried for grinding wheat —steam being applied to it, with a three-inch belt. Two bushels of very hard wheat were well ground in thirty minutes. There are bolts belonging to the mill, by which excellent flour can be made.

Stafford's Process of drying Grain.—In our June number we spoke of this invention. Mr. Stafford has since sent some corn-meal, prepared in his way, to the Secretary of the N. Y. State Ag. Society, for distribution. We have tried it, and found it excellent, both for bread and puddings.

Lawrence Scientific School.—We are pleased to learn that this very important and valuable branch of Harvard University, continues to receive the well-deserved countenance and encouragement of the public. The chemical department is under the charge of Prof. E. N. Horsford, whose interesting letters from Germany, while he was a student in the celebrated Giessen Laboratory, and many other able articles from his pen, have been read with much satisfaction by the readers of the Cultivator. Lectures will be given on zoology and geology, as heretofore, by Prof. Agassiz. The term commenced on Monday, the 28th of August. The general course of instruction will be essentially the same as was pursued last term, of which we gave some notice in our current volume, page 127—(April number.) Particulars can be ascertained by applying to Prof Horsford, at Cambridge.

Atmospheric Churn.—We have witnessed the operation of a churn by this name, said to have been invented and patented by Johnson & Lewis, of Sangamon county, Illinois. Its chief peculiarity consists in forcing atmospheric air through the cream or milk, by means of a hollow upright shaft, having holes in the upper end, to the bottom of which is attached a transverse tube, open at each end—the latter being made to revolve horizontally through the cream by means of gearing attached to the shaft. The turning of the shaft causes the descent of the surrounding air, which passes through the cream, and escapes from its surface in the form of bubbles. It is claimed that butter can be produced by this churn, from cream, in less than five minutes, and from new milk in fifteen. In the trial which we witnessed, butter was produced from cream in *seven* minutes, and from milk in *nine*. Mr. Emery was present with one of Kendall's churns, and produced butter from cream in *ten* minutes. An equal quantity of cream was used by both churns—the Atmospheric produced *one pound* of butter, and Kendall's *one pound seven and a half ounces*. Such was the result on this trial—how it would be on other trials we cannot say; neither can we say positively, what was the occasion of so great a difference in the amount of butter produced by the two churns. The Atmospheric churn appears to operate on a correct principle—that of mingling the air with the cream; but we are not in favor of such *rapid* churning. Having formerly had some experience in making butter, we should prefer that the churning, for a quantity of ten to twenty pounds of butter or more, should be prolonged to thirty minutes, at least. According to our experience, the best butter is not produced by a very *short* nor a very *long* period in churning. If it is churned too quick, the separation is not complete, and the butter, besides being less rich, is deficient in quantity; if the process is continued too long, the butter is likely to be *oily*. We think our best butter makers would decide that churning for ordinary quantities, should occupy from thirty to fifty minutes.

Cheese and Exports.—Herkimer county, N. Y. has produced 8 million pounds of Cheese annually, St. Lawrence 9 million, and the whole state, according to the census of 1835, 36 millions. The amount received at tide water on the Hudson, has increased from 1834 to 1846, from six million to thirty-five million. From 1840 to 1846, the amount exported has increased from 700,000 to 8,600,000 lbs.

RECLAIMING WORN-OUT LANDS.—A correspondent at Manchester, Ct., whose signature is J. P. F., states that he bought a tract of land which had been considered nearly worthless. He expended in hauling peat on it, and for one thousand bushels of ashes, about five hundred dollars, and he states that the fall feed, last season, was worth the interest of the outlay, and that the prospect the present season is more favorable, affording good encouragement for the improvement of Connecticut worn-out lands.

SOUTH-DOWN SHEEP.—At the late letting of Mr. JONAS WEBB's South Down rams, Cambridgeshire, Eng. 67 were let at an average price of £23 10s. ($117.50) per head, for the season. One lot for £79 (395,) and three yearlings at an average of £60 ($300) each, for the season.

MR. COLMAN.—The occasion mentioned in the above paragraph drew together an assemblage of more than two hundred agriculturists and gentlemen from various parts of Britain. Our countryman, Mr. COLMAN, who had just returned from a long agricultural tour on the Continent, was present, as was also another American gentleman, Mr. BASSETT. In reply to a complimentary toast by the chairman of the meeting, LORD HARDWICKE, Mr. COLMAN made an eloquent speech which was received with cheering applause. He alluded to his continental tour, and said the best agricultural district he had passed through was Flanders. The great success of the system there pursued, he thought was attributable to the saving and application of urine. He spoke of the beet culture which he had seen in France; he thought it very profitable. The refuse, after the root had passed through the process for sugar making, was very valuable for feeding stock. He saw in June last, a large lot of cattle and sheep which were fattening from the refuse of the crop that had been used for sugar the previous fall, and the animals were in fine condition. As to improvement in live stock, however, Mr. C. thought it was "clear as the light of day," that the farmers of England "were not only a whole head, but a whole length, before all other countries!" He closed by some happy allusions to the peaceful relations existing between England and the United States.

CHALLENGE.—Mr. THOS. BELL, of Morrisiana, Westchester county, N. Y., offers to show his Durham bull, *Marius*, at the State fair at Buffalo, against any Durham bull that has been previously awarded the first premium of the New-York State Agricultural Society, for $50 to $100 a side. The judges to be named on the ground, and to be not less than three in number. This bull was bred in England by the late Earl Spencer. He will be offered for sale at the Fair, under the direction of the officers of the New-York State Agricultural Society. Mr. BELL had limited the time of the acceptance of this challenge to the 20th of August, but we hope he will conclude to leave it open till the first day of the State Fair—September 5th.

NORMANDY CATTLE.—The editor of the *Maine Farmer* inquires of the editor of the *Massachusetts Plowman* in regard to a bull and two cows, supposed to have been imported from Normandy by the Massachusetts Society for Promoting Agriculture, about the years 1817 or '18. The *Plowman* calls for "information" in regard to the stock. As an "*outsider*," we would inquire in the first place whether the *Society* ever imported any such animals? The Journal of the Society for 1817, states that two cows and a bull had been *ordered*, but we never heard of their arrival. Hon. JOHN HUBBARD, imported a Norman or Alderney bull, which he presented to the Society alluded to. In *1823*, the writer saw this bull at the society's show at Brighton. He was then two years and a few months old. He was offered for sale at auction, but as a satisfactory price could not be had for him, he was bid in by one of the officers of the Society. He was kept for several years by the late JOHN PRINCE, Esq., of Roxbury. He was of a light chestnut color, of slender and rather loose make, indicating a feeble constitution. Mr. PRINCE and other gentlemen imported cows of the same breed, about the same time. We several times saw these cows,—or some of them—their progeny, and also some of the half-blood progeny of the bull. They seemed generally deficient in constitution. The cows, however, produced some good stock by bulls of other breeds. We recollect particularly, seeing at Mr. PRINCE's some fine calves and young stock, some of which were a cross from the Norman cows by the imported bull *Holderness* or *Fortunatus*, and some a cross from the Hereford bull, *Sir Isaac*, sent out by Admiral COFFIN.

WIRE WORM.—A successful farmer of this vicinity, Mr. D. D. T. MOORE, states that he has tried various substances for preventing the ravages of the wire worm, none of which, excepting sulphur, proved of any use. An Irishman told him that sulphur had been used with advantage in Ireland. Before planting his corn, Mr. M. wet it and rolled it in flour sulphur, and afterwards coated it in plaster to prevent the sulphur from wasting. He saved a crop by this means where he had failed for three years before. We see no reason why the sulphur might not be equally effective for any other grain.

SUBSOIL PLOWING.—Clark Beardsley, of Avon, Mich. states in the Michigan Farmer, that he harvested wheat on *ten acres* of good wheat land in 1844, which had been much run for 17 years, and the product was only eighty-five bushels. The soil was clay and was full of "foul stuff." The next year he subsoiled it with a span of horses and two yoke of oxen, by once plowing, and thoroughly subdued the foul stuff, and obtained in 1846, from the same ten acres of land, over three hundred bushels of wheat. And yet we know a farmer of large and ample means, who admits that the subsoil is more fertile for wheat than the upper soil, who says he "cannot afford" to use the subsoil plow!

TALL CORN.—DR. LEE writes to his associate of the *Gen. Farmer* that the corn on the Savannah bottoms was "from 12 to 18 feet high." His friend inserts a note stating that he suspects there is "some mistake in the figures," but he "follows copy." We have seen corn in Western Virginia, and in Ohio, which was taller than the Doctor mentions, and once measured a stalk taken from a field belonging to SETH BAILEY, a few miles below Marietta, on the Ohio river, which was *nineteen feet two inches* in length, cut even with the surface of the ground. We presume such evidence of this fact could be had as would be received in a "court of justice."

"DO TOADS SING?"—Our friends of the *Prairie Farmer*, in answer to this question, proposed by a correspondent, say, they "never heard a *toad* sing, or of one's singing;" but they think "*frogs* do little else." There may be some doubts as to what should be called *singing*. People have different musical tastes, as was illustrated by the old story about the "heavenly music" made by a pack of hounds. Now frogs and toads, (we don't mean *tree*-toads, everybody knows their *trills*,) both *make a noise*—probably from the same impulse—and we are not aware of any *rules* that would recognise the one as *singing* and reject the other. If our friends will secure some well-grown toads at the "pairing season," or about " planting time," and let them loose at the dusk of evening, they will quickly have the satisfaction of listening to the " notes " of the "harsher sex." They swell out their throats till the sound bursts forth with almost as much " power" and "compass" as that of a fashionable *biped* " performer." We have *seen and heard* all this.

Annual Address at the State Fair.—The Hon. John C. Spencer, of Albany, has consented to deliver the customary address before the New-York State Agricultural Society, at the meeting at Buffalo.

" The Plow, the Loom and the Anvil."—An advertisement of this publication will be found in this number of the Cultivator. Its senior editor, J. S. Skinner, Esq., is well known as the pioneer in the establishment of agricultural periodicals in this country, having started the *American Farmer* in 1819. He still wields a vigorous and ready pen, and we have no doubt will render the work alluded to worthy the public patronage, which we trust will be liberally bestowed.

Materials for Manure.—During the dry weather of September and October, the farmer will find his account in collecting muck or peat, and such loose vegetable matters as are to be had, for the purpose of covering his barn-yards to absorb the urine from his stock and prevent the waste of the liquids from the manure. Excepting while the weather is very cold, peat or muck, if kept tolerably dry, may be used in the stables, and by absorbing the liquids, converts them into a portable form, and by retaining the nitrogenous principles, and adding them to the compost-heap, a proper decomposition of the mass is secured. Thus a valuable article, which would otherwise be wasted, is saved, and its addition to other materials increases *their* value also. A good supply of peat and articles for litter should be so cured before winter sets in.

Thompson's Bank Note Reporter.—We have received this periodical several years, and consider it almost indispensable to business men. It contains a complete list of all the banks in the United States and British Provinces, with lists of Counterfeit bills, rates of exchange, &c. It is published daily, weekly, semi-monthly and monthly—weekly $2 a year—twice a month, $1, and monthly, 50 cents. Address J. Thompson, Exchange Broker, 69 Wall-st., New-York.

Guinea Grass.—In the Cultivator for 1845, page 210, "B. M." of Tuskaloosa, Ala., recommends the culture of this grass "for the south." In the Southern Cultivator for August last, the same writer states that he is convinced by two years' experience, that " *it is a very serious pest*," and he is therefore, desirous of publicly retracting the recommendation he had before given: He states that it does not make good hay, and that it takes such firm possession of the ground that it is almost impossible to eradicate it.

Seeding Grass Lands.—September is a favorable season to sow grass seeds. In many sections, grass or hay yields a more profitable return than any other crop, and it hence becomes an object to keep the lands in mowing or pasturage as long as practicable. On quite moist soils, the sward may be kept up, and the production of herbage continued without diminution, by occasional top-dressings of manure. But on drier soils, it often becomes necessary to renew the grass from seed. In order to avoid the loss of a crop, it is practised in such cases, to plow the sward soon after the hay is taken off, with a level, smooth furrow, and after using a light, sharp harrow, to sow the grass-seeds and brush them in. The time of sowing may vary according to the state of the ground. If very dry, it is best to wait for rain; but if sufficiently moist to insure the germination of the seed, the latter part of August or fore part of September is generally considered the best time. Yet we have known lands sown to grass, as late as October, with good success. If the weather during fall is favorable, the grass gets so well set that it stands the winter, and grows well with the opening of spring. The first crop is however, considerably later, though it often gives a good burden at the first mowing. It is proper to remark that this mode of seeding is not recommended for lands that are much acted on by frost; that is, lands on which crops are liable to " winter-kill."

Kyanizing Wood.—The *Kennebec Journal* states that an establishment for carrying on this process has been erected at Augusta. The timber is first placed in iron boilers about fifty feet long, and steam is applied to it. The steam is then condensed by ejecting cold water, thus producing a vacuum and opening the pores of the wood; after which a solution of coal tar. (obtained from the bituminous coal, in the process of gas making) is let into the boilers from an immense vat overhead, and a great force applied to it by means of a force-pump worked by steam. After six or eight hours from the commencement of the operation, the solution is drawn off into a vat below, from which it is pumped up to the one above, ready to be again used. The ends of the boilers are then taken off, and the timber drawn out all together.

Appreciation of Agricultural Publications.—E. Newton, Esq., in his address before the Mahoning county, (O.) Agricultural Society, observes:—" Agricultural publications are the best and cheapest mode of obtaining information upon all subjects of husbandry. They cost but little, and are within the power of all. One good day's work will pay for one, and all have an abundance of time to read them. They contain the experience and observations of the most scientific farmers in the country; the prospects of crops in all countries. and the condition of the market; facts all important to be known and understood. I have been surprised to see how few are taken, and have often been told by farmers that they were not able to pay for them. I can hardly appreciate the remark. Every one is able to pay for that which will immediately return them an hundred fold. I believe that a single number of any of the publications, if thoroughly read, would be found to contain some fact, if adopted, that would more than pay for the full year. By raising an extra bushel of wheat, it would pay for the year."

Potato Disease in England.—The last accounts received from England state this malady had made its appearance in many districts, and that the loss of a considerable portion of the crop was inevitable. Accounts from Ireland, also, state that the disease had appeared there in many instances.

Small Pox in Sheep.—A disease called *variola ovina*, or sheep pox, has appeared in many flocks in England, and already occasioned great loss. It is said to be both infectious and contagious. The diseased sheep are affected with ulcers, resembling the sores produced by small pox in man. The English veterinarians are giving the closest attention to the disease.

Ants as food.—White ants, or termites, are eaten by various African tribes, both raw and boiled; and it is said the Hottentots " get into good condition on this diet." In India, the natives capture great quantities of these insects, which they mix up with flour, producing a kind of pastry which is purchased at a cheap rate by the poorer people. Some of the Africans prepare large quantities of them for food, by parching them in kettles over a slow fire. In this condition they are eaten by handfuls as delicious food. The traveller Smeathman states that he often ate them dressed in this way, and found them to be "delicate, nourishing and wholesome, resembling in flavor sugared cream, or sweet-almond paste." In Brazil, the abdomens of yellow ants are eaten by many persons. Humboldt states that in some of the South American countries, ants are mixed with resin, and eaten as a sauce. In Siam ants' eggs are considered a luxury; they are sent to table curried, or rolled in green leaves, mingled with fine slices or shreds of fat pork. In Sweden, ants are distilled along with rye, to give a flavor to the inferior kinds of brandy. Chemists have ascertained that ants secrete a pleasant kind of vinegar, or a peculiar acid called formic acid. We derive these facts from an article on "Useful Insects and their Products," in the Scottish Quarterly Journal of Agriculture.

Grub-Eaters.—In order to acquire that plumpness which is deemed in the East a beauty, the women of Arabia and Turkey swallow, every morning, three specimens of a grub dug out of the filth of the garden and fried in butter. Turkish women cook and eat a certain beetle in butter to fatten themselves. When an English traveller expressed his surprise and disgust at some Arabs eating insects, the men justly retorted that it was poor affectation in a person who could swallow raw oysters. The first man that ever made the experiment of swallowing a raw oyster must have been a rare brave fellow; but while we thank him for introducing us to this delicious mollusk, we may regret that he did not display his gastronomic courage upon cockchafers, and other small short-horns. *J. H. Fennell, in Scottish Quar. Jour. Ag.*

India Rubber Boat.—A correspondent wishes to know whether such an article has ever been used—its cost—and whether it could be had in the city of New-York. Perhaps our friend of the *Spirit of the Times* can answer.

Method of distinguishing Iron from Steel.—Drop a little weak aquafortis on the metal; let it remain for a few minutes, and then wash it off with water. If it is steel, the spot will be black; but if iron, the spot will be whitish grey.

Creosote possesses the power of coagulating albumen, and rendering all animal substances imputrescible. It is to this principle that smoke owes its powers in preserving meat.

The Fig.—In countries where the fig is cultivated, certain species of gall-flies are made to assist in ripening the fruit. "The fig consists of a pulp, containing a number of seed-like pericarps, inclosed in a rind. It has no visible flower, for the fruit rises immediately from the joints of the tree, in the form of little buds, with a perforation at the end, but not opening or showing any thing like petals or the ordinary parts of fructification. As the fig enlarges, the flower comes to maturity in its concealment; and in some countries the fruit is improved by a singular operation called *caprification*. This is performed by suspending on threads above the cultivated figs, branches of the wild fig, which are full of a species of gall-fly. When the insect has become winged, it quits the wild figs, and penetrates the cultivated figs for the purpose of laying its eggs; and thus it appears both to insure the fructification, by dispersing the pollen, and afterwards to hasten the ripening, by puncturing the pulp, and causing a dispersion or circulation of the nutricious juices."* A similar effect is sometimes accomplished by puncturing the figs with straws dipped in olive oil.

Keeping Pumpkins.—Our friend Dr. Holmes, of the *Maine Farmer*, states that he had a pumpkin, of the growth of 1847, presented him on the fourth of July. It had been kept in a dry room where the temperature had not been below the freezing point. If the Doctor will get some seed of the "seven years" pumpkin and raise a lot of that variety, he will find it no rarity to have sound pumpkins on the fourth of July, or at any other time. We have frequently seen those that were four or five years old, and we cannot say how much longer they would keep.

Fruitfulness.—John Lewis, of Knox county, Ohio, says that in 1834, he set out a young apple-tree of the variety known by the name of Milam, and in 1846, 12 years from the time of transplanting, it bore thirty-five measured bushels of apples. The Milam is a fine variety, cultivated in central and southern Ohio, of medium size, of a greenish color with dull red stripes, and of a mild sub-acid flavor.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Aug. 14, 1848.

FLOUR—Genesee per bbl. $5 37½a$5.50—Ohio, $5a$5.12½

GRAIN.—Wheat, per bu., white Ohio $1 06—red 91 cts.—Corn, round yellow, 68 c — White Virginia 61 cts.—Rye, 70a71c.—Oats, 40a42c. dull.

BUTTER—Orange County, per lb., 15a17c.—Western, dairy, 11a12½ c.

CHEESE—per lb., 5½a7c.

PORK—Mess, per bbl., $11.37½a$11.50—Prime, $8.94a$9.

HAMS—Smoked Western, per lb., 6a9c.

LARD—in kegs, per lb., 7½a7¾c.

HEMP—American dew rotted, per ton, $135a$145.

HOPS—First sort, per lb., 5c.

COTTON—Upland and Florida, per lb., 5a7½c.—New Orleans and Alabama, 5a8½c.

WOOL—(Boston prices,) Aug. 12.

Prime or Saxon fleeces, washed per lb........	42a45	cts.
American full blood fleeces,....................	38a40	"
" half blood do	30a32	"
" one-fourth blood and common,.....	28a29	"

☞ There is little doing in salted provisions. Beef is heavy and without sales. There is fair inquiry for butter and cheese of good qualities The demand for flour and grain is moderate. Cotton is heavy. The wool trade is still dull, and sales light.

TO SEEDSMEN AND NURSERYMEN.

ORDERS will be received by the undersigned for the purchase and transmission of seeds, plants, shrubs and trees, from the most celebrated French Nurseries, on moderate terms and with despatch. LIVINGSTON, WELLS & CO., 10 Wall-st.
New-York, Sept. 1, 1848.—2t.

NURSERY OF J. J. THOMAS.
Macedon, Wayne Co., N. Y.

THIS Nursery now contains many thousand fine trees, of large, handsome, and thrifty growth, consisting of Apples, Pears, Peaches, Cherries, Apricots, &c., of the best standard sorts, as well as the finest only of new and newly introduced varieties; all of inferior merit being rejected; *and in no case are any propagated for sale except those thoroughly proved in bearing.*

When purchasers desire, selections of the best for affording a regular succession of fruit through the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y.

TO WOOL GROWERS.

I HAVE recently sold my flock of Paular Merino Sheep to A. H. Avery; who has on hand a number of young Paular Bucks for sale. Also, a few ram lambs, sired by a buck from the flock of J. A. Tainter Esq., imported from Europe in 1846. This Buck is of extraordinary size, and his first fleece—well washed and free from gum—weighed near 10 lbs.

It is believed the lambs, from this splendid young buck, will exceed in size and amount of wool, even those heavy fleeced Paulars, which I have heretofore sold. Orders addressed to A. H. Avery, Galway, Saratoga county, N. Y., will be promptly attended to.

Aug. 1, 1848—1t. R. A. AVERY.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* Leached Ashes, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,
May 1, 1848—6t. Cabotville, Mass.

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* *Vegetable substances used in the Arts.*

STRAWBERRY PLANTS.

OF most of the celebrated fine varieties, for sale at the nursery of J. J. THOMAS. Macedon, Wayne Co., N. Y. Among these are the following :—Hovey's Seedling, Large Early Scarlet, Dundee, Prolific Hautbois, Duke of Kent, Black Prince, Boston Pine, Swainstone's Seedling, Myatt's Eliza, Hudson Bay, Red and White Alpine, &c. A part can be furnished in quantity at 75 cents to $1 25 per 100—the remainder at 19 to 38 cts. per dozen. Packages forwarded by Express, and no charge for packing where orders amount to $3 or more.

Several of the above named varieties, with common culture, usually attain an inch to an inch and a-quarter in diameter, and are of excellent quality. If the roots are immersed in mud when set out, they may, with a few waterings, be transplanted in summer with scarcely a failure; and they should in no case be set later than the first of autumn, that the roots may become well established before winter, and good crops be afforded the next summer.

GREATEST IMPROVEMENT OF THE AGE.

Smith's Lever Drill.

Patented November 4, 1846, to H. W. SMITH.

THE advantages of this machine as fully established by use and experiment, are

1.—A saving of from two to three pecks of seed per acre.

2—An equal distribution of any given quantity of seed, covered at a uniform depth.

3—A saving of labor; a boy and team, with this machine, can complete from 8 to 10 acres per day; and the surface of the soil is left in such a position that it does not encrust, and undergoes a constant course of natural cultivation by the action of every shower, so that the gases and atmosphere readily penetrate,—hence,

4.—The grain is not so liable to be thrown out by frost.

5.—It stands firmer and stronger, and is not so liable to be injured by rust or the fly

6.—Where these machines have been used, the saving of seed and increase of product, amounted to from 20 to 25 per cent.

The great improvement in this machine, over all others of the kind, is its simplicity, durability and economy, and the facility and certainty with which it can be *set* or *altered* by a regulated *index* and *guage* to drill or plant any given quantity of grain per acre, at any given depth.

These machines are now being made at Syracuse.

County rights to manufacturers sold on reasonable terms.

For further particulars address the undersigned, post paid at Syracuse.

C. MASTEN,

Aug. 1, 1848.—3t.

FARM FOR SALE.

THE Subscriber offers for sale his farm situated in the town of Ghent, Columbia county, N. Y. 10 miles from Hudson, on the Hudson and Berkshire Railroad, four miles south of the Chatham Depot on the Western Railroad, ¼ mile east of the Union Turnpike, and 7 miles from the village of Kinderhook.

This farm contains 234 acres, 40 acres of which is covered with good timber. The whole is well watered by streams and never-failing springs, and in a high state of cultivation. On the premises is a large dwelling house, nearly new, built in the very best manner, and replete with every convenience The out-houses, consisting of a large barn, sheds, carriage houses, &c. &c., are in good condition The fences, consisting chiefly of stone wall, (built with stone from a quarry on the premises,) are in excellent order. The soil is free from stone, is easy of tillage, and bears as high a reputation for productiveness as any in the Empire State. For terms and further particulars enquire on the premises.

TOBIAS L. HOGEBOOM.

Ghent, July 13, 1848—2t.

WHEELER'S PATENT HORSE POWER AND THRESHER.

THE above machines having attained a wide introduction among all classes of Farmers and Mechanics, and having without exception, given the fullest satisfaction, we do not hesitate to recommend and warrant them to any and all wishing such machinery—For prices, particular recommendations, &c., see the Albany Cultivator for February, 1847 and 1848, also for May, 1848. Also Catalogue, gratis, at Store, Nos. 10 and 12 Green st , Albany, or by mail

HORACE L. EMERY.

General agent for the manufacturer, wholesale and retail.

EAGLE PLOWS.

NO Plow has been so long before the public with so few alterations, come into so general use, or received so many and so high grade premiums, as the genuine Eagle Plow, made by the inventors, Messrs. Ruggles Nourse & Mason.

Notwithsanding the great diversity of soils, modes of culture, and the constantly increasing competition, and being subjected to the most thorough and persevering trials ever had in this country, the Eagle Plow still stands at the head of the list for excellence of work, materials, durability, workmanship, ease of draft, and price.

Some of its merits over other kinds in use, are that the metal is of such a mixture of irons as gives them strength equal to malleable iron and admits of the chilling process on all the wearing parts, which causes them to wear sharp, and do three to five times the amount of work, as the ordinary kind of plow casting—while the risk of breaking is not increased by the process

All sizes of the above plows constantly on hand at wholesale and retail, at manufacturer's prices, at the Albany Agricultural Warehouse, Nos. 10 and 12 Green St , Albany. All plows warranted.

For prices description, &c., see Catalogue, gratis at Store or by mail.

H. L. EMERY.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent. lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers.

E. J. BURRALL.

Geneva, April, 1848—6t.

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one is constant operation may be seen.

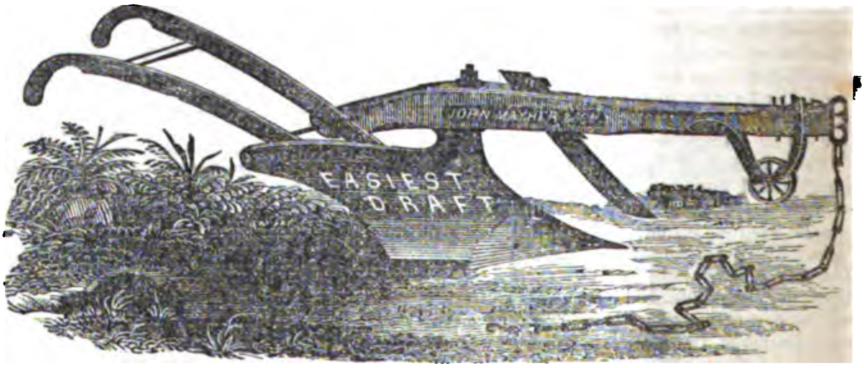
H. L. EMERY.

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost.

CLARK LEWIS, 2d.

German, Chenango Co., N. Y., April 15, 1848.



JOHN MAYHER & CO.,

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New-York, which will be sold at lower prices than they can be purchased at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayer & Co.'s celebrated and unequalled First Premium Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, August 1, 1848.—tf.

THE PLOW, THE LOOM AND THE ANVIL.

AN Agricultural Journal published *monthly* in Philadelphia, (as successor to the Farmer's Library,) by G. B. ZIEBER & Co., edited by J. S. SKINNER & SON.—Terms, five copies for $10, two copies for $5, and three dollars for a single subscription. The object of this Journal, as its title indicates, is to discuss and disseminate, with zeal and earnestness, not only the philosophy and practice, but also the *political economy* of American Agriculture. It is designed to convince the Farmer and the Planter, that encouragement and preference of American over foreign labor, in every brach of industry for which we have the climate and materials, is a question which interests *the cultivators of the soil above all classes of people:* and to show that what American Farmers most need now, is not so much instruction how to *use the plow*, but how and by what policy we can have the greatest number of thriving consumers, demanding here at home, the products of the plow. In a word, "THE PLOW, THE LOOM, AND THE ANVIL," is designed to show that, instead of a precarious dependance on ever fluctuating and uncertain *foreign* markets, as recommended in reports and speeches published and widely disseminated by the General Government, and by the New-York State Agricultural Society, our best and surest reliance under a wise policy, would be, on the *home market*, by giving fair and steady encouragement to *American Industry*, employed, and consuming at home, the products of American Husbandry.

In this earnest undertaking to propagate, what is believed to be the true conservative doctrine, the Editors have the countenance and good will of many of the most highly gifted and patriotic men of our country. Mr. Skinner is giving to it all his time and abilities, and relying on its success exclusively, as his only means of support. All he asks is that those who wish it success, will *subscribe at once;* and those who are opposed to his views will read attentively and judge as impartially as fixed opinions will allow.

Of all improvements in practical agriculture, and in the structure of the implements employed in it, the reader will be kept advised. The editors solicit "aid and comfort" from all the friends of domestic industry, *in all its forms:* not to be rendered as to the "agitators" in favor of free trade, in hard money, gratuities by thousands and hundreds of thousands, but by two neighbors in a V, and by clubs of five in a X.

Now among the oldest of the Editorial Fraternity, he will feel greatly obliged to any one of them who will give this one insertion, as it is kindly done here. Editors and Publishers take the risk of the mail. No formality is necessary, except to say—J. S. Skinner & Sons, or G. B. Zieber & Co., Philadelphia. $5 enclosed for two subscriptions. A. B.———Post Office.
C. D———Post Office.

Or, in this wise $10 for five subscribers and their address.

STRAWBERRY PLANTS.

HOVEY'S Seedling, Boston Pine, Large Early Scarlet, Crimson Cone, (one of the most vigorous, prolific and best), Hudson's Bay, Victoria, Bishop's Orange, 75 cents per 100, *cash*, for quantities not less than 500 plants in the whole, nor less than 100 plants of a variety carefully packed and forwarded as directed—Other varieties specified in our catalogue, at a reduction of *one-third* from the catalogue prices, when not less than 500 plants in the whole are ordered. Also the following new Ohio varieties; Burr's Seedling, 50 cts. per doz. $2.00 per 100 Burr's Mammoth, 1.50 per doz. Burr's New Pine, $1 50 per doz. Taylor's Seedling, $1 00 per doz., $4 00 per 100. Hudson of Cincinnati, 37½ cts. per doz. $1 50 per 100. Turner's Pine, (Montevideo Pine of Prince,) 75 cts. per doz: Also, the

ABERDEEN BEEHIVE STRAWBERRY,

Strong plants, well rooted in small pots, and carefully packed in a box for distant transportation; price $5.00, *cash with the order*, for 18 plants, including package. We imported our stock direct from Mr. Mathewson, of Aberdeen, Scotland, who originated this variety, and their genuineness may therefore be depended upon. Descriptive catalogues gratis on application, post paid.

Flushing, L. I., Sept. 1, 1848. WINTER & CO.

GRANT'S PATENT FAN-MILLS.

I. T. GRANT & CO, Junction, Rensselaer county, N. Y, continue to manufacture these celebrated mills. They have been awarded five first premiums at the New York State Fairs and the Fairs of other States, and in no instance has any other mill of the kind received a premium over them. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the last year they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society for 1847, it will be seen that they were tried by several large farmers, and highly approved One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains as before. Our *agents* are H. L. Emery, Albany; G. S. & F. A. Willis, Pittsfield, Mass.; Parsons & Dickinson, Springfield, Mass., John Mayher & Co., 195 Front Street, New-York; Benj. Myers, Newark, N. J.; S. & E. Hasbrook, Stone Ridge, N. Y.; James S. Brown, Newburgh, N. Y.; H. Warren, Troy; Hugh Van Alstyne, Kinderhook; S. & M. Peckham, Utica; E. Whitman, Jr., Baltimore, Md.; Fitzhugh Coyle, Washington, D. C; Denslon & Webster, Savannah, Geo. Address I. T GRANT & Co., Junction, P. O., Rensselaer county, N. Y., by whom all orders will receive prompt attention Sept. 1—4t.

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c &c.

F. A. GIFFORD.

Hudson, May 9, 1848—5t*

IMPROVED STOCK FOR SALE.

THE subscriber will take orders and execute them in the best possible manner, for—

Durham, Hereford, Devon and Ayrshire cattle. Price from $50 to $300 each, according to age and quality.

Saxon, Merino, Southdown, Leicester, and Cotswold sheep. Price from $10 to $30 each.

China, Sussex, Berkshire, and Lincoln pigs. Price per pair at three months old for the three first mentioned breeds, caged and delivered on board ship, $20. Price of the Lincolns, $30 per pair. These last are of a recent importation—color white, and grow very large.

All orders must be accompanied with the cash.

SAMUEL ALLEN,
mjulysept. 189 Water-street, New-York.

SELLING OFF.

LINNÆAN BOTANIC GARDEN & NURSERY. Late of WM. PRINCE, deceased, *Flushing, L. I., near New-York.* WINTER & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, who therefore intends to relinquish the business, the entire stock of this establishment, comprising every description, including the newest and choicest varieties of fruit and ornamental Trees, Shrubs, Vines and Plants, Roses, Greenhouse plants, Box Edging, &c., will be disposed of in lots to suit purchasers, at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of ten dollars or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, venders, and others wishing to purchase by wholesale, will be supplied at such reduced prices according to quality and quantity, as will probably prove satisfactory to them. Young stock, both in the Fruit and Ornamental departments, supplied very low by the quantity.

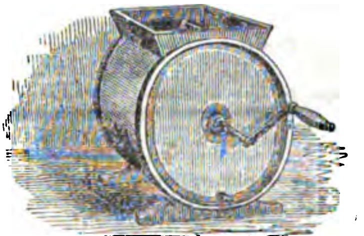
An opportunity is afforded to Amateurs and Nurserymen to obtain extra sized and many new and rare specimen fruit and ornamental trees, shrubs and plants, at very moderate prices.

Extra sized ornamental and shade trees for streets, lawns and parks, low.

The establishment, now in the highest order and densely stocked, will be disposed of upon liberal terms, offering from its location, celebrity, saleable stock, greenhouses, dwellings, and other conveniences for conducting the business, very superior advantages to any person disposed to pursue it.

It is requested that letters of enquiry, &c. be *post paid.* Descriptive Catalogues *gratis.*

August 1, 1848.—2t.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos 10 & 12 Green-street, Albany, New-York, or by mail.

June 1, 1848. H. L. EMERY.

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 60 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

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THE HORTICULTURIST

AND

JOURNAL OF RURAL ART & RURAL TASTE.

Edited by A. J. DOWNING, Esq.

PUBLISHED at the office of the Cultivator, Albany, N. Y., by Luther Tucker, at $3 per year.—Two copies for $5. Vols. 1 and 2, completed with the June No. 1848, now ready for sale, either bound, or in paper covers to send by mail.

Contents of No. 2, Vol. III—for Aug., 1848.

A Chapter on Roses—The Wistaria Sinensis; Remarks on New Strawberries—Strawberry Culture and selection of varieties—The Geranium and its Culture—Remarks on the Culture of Native Grapes—New Mixture to Drive away Insects—New or Rare Fruits that have proved Excellent—Prof. Shepard on Agricultural Schools—Transactions of the New-York State Agricultural Society, for 1847—The Onondaga Pear on Quince Stocks—Belle Magnifique Cherry—Cutting out the Fire Blight—Garden Culture of Indian Corn—Fruit Culture at the South—German Greens or Siberian Kale—Horticulture in Carolina—Mr. Longworth's reply to Mr. Prince—Pomological Queries—New-Haven and Albany and Rensselaer, Horticultural Societies—Bugs on Vines—The Strawberry Question Again—New-York Strawberry Market—Answers to Correspondents—Proceedings of the Massachusetts, and Pennsylvania Horticultural Societies.

ILLUSTRATIONS—*Frontispiece*.—Souvenir Le Malmaison Rose.—The Geranium—Large Early Apricot—Burr's New Pine Strawberry—Butner's Yellow Cherry—Cherry Currants.

The Horticulturist.—We invite the attention of the reader to the prospectus of the Horticulturist, published in another column. It is decidedly the best periodical of the kind now published, and should be in the hands of every nurseryman and fruit-grower in the country. We have been an attentive reader of the Horticulturist since it was commenced and can heartily recommend it to the favorable consideration of the public.—*O. Free Press.*

"The Horticulturist," for June, is the last number of the second volume, and a new volume commences in July. We earnestly recommend this variety to all who desire to increase their qualities of fruit The time is not far distant when the cultivation of *good* fruit in this region, will be deemed the most profitable product of the soil. Raising poor fruit is a useless waste of the soil.—*Vt. Phœnix*

THOMAS' FRUIT CULTURIST,

For Sale at the Office of the Cultivator.

MERINO SHEEP FOR SALE.

HAVING arrived at a point in which I desire to reduce my stock of Sheep, I have therefore concluded to sell about 600 Merino Sheep this fall, which have been bred with great care, and are inferior to none in the United States—200 of which are half blood, from the importation made by Mr. Taintor. Nothing need be said to recommend them, for they recommend themselves.

Cornwall, Sept. 1, 1848.—3t. A. L. BINGHAM.

FINE DEVON CATTLE FOR SALE.

THE Subscriber will offer for sale at the show of the Hartford County Agricultural Society, to be held at Hartford on the 19th October next, a portion of his herd of Pure Devon Cattle, as follows:

1 Bull, 4 yrs old 29th June last, a very superior animal, bred by Lewis F. Allen, Esq., of Black Rock; has been awarded the first premium for three years in succession at the Fair of the Am. Institute.

2 Full blood cows or heifers.

3 or 4 Spring Calves.

The above stock was derived principally from the herds of Lewis F. Allen. Geo. Patterson of Md., and R. L. Colt, Esq. of N. Jersey having recently purchased his entire herd.

Full Pedigrees of the stock will be shown at the Fair.

Farmington, Sept. 1, 1848.—1t. WM L. COWLES

SALE OF SHORT HORNED CATTLE.

I WILL sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers and young Bulls. A catalogue with their pedigrees will be ready at the time of the fair

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and Six South Down Rams.

References—A. B. Allen, N. York; Sanford Howard and B. P. Johnson, Albany; Francis Rotch, Butternuts; and L. F. Allen, Black Rock. JOHN M. SHERWOOD.

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, OCTOBER, 1848. No. 10.

THE FARMS OF MESSRS. B. & J. LYNDE.

EDITORS OF THE CULTIVATOR—I recently spent a few hours very agreeably, at the farms of Messrs. Barnard and John Lynde, in Guilford, Vt.; and although I have but a few moments of leisure, I have thought that even a brief notice of some things which came under my observation, might be interesting to some of your readers. It seems to me that there can be no reading upon the subject of agriculture, more interesting or useful than notices of the operations of those successful, intelligent and practical farmers, who, in their practice, bring under contribution all the real and substantial improvements of the times.

The farms of the Messrs. Lynde contain over two hundred acres each, being a high swell of land, the surface moderately rolling, and the soil a strong, fertile loam, resting upon an impervious hard-pan, at the depth of 18 to 24 inches. Their buildings are substantial and spacious, presenting an appearance of neatness and good order. Upon one farm, the barns 65 by 40 and 30 by 40, and on the other, 70 by 45 and 30 by 40, with horse-barns and shed-lofts. Notwithstanding these ample accommodations for the storage of their produce, the present season has been so highly propitious for the hay crop, that they are troubled to find room for all their forage; and they will soon be under the necessity either of curtailing their manufacture and application of manure, or of building more barns. Doubtless, however, they find some alleviation for their troubles, in this respect, in the contrast presented by the condition of the sluggard, whose worn-out acres and generally dilapidated appearance, under a ruinous "skinning" system, have brought *him* to the necessity of requesting some shylock to "salt him down" with a mortgage; and whose perfect horror of all innovations upon that system—sitting like an incubus upon him—effectually prevents any improvement in his condition, and renders it quite certain that in a few years the well known advertisement will be posted, that a certain farm, "suitably divided" &c., &c., is "for sale."

The Messrs. Lynde have been famous for their excellent butter and cheese; and were formerly extensively and profitably engaged in the dairying business;—their sales in one of the last years of their operations in this line, amounting to 14,000 lbs. of cheese at 11 cts., delivered at the farm. Of late, owing to increasing years, &c., they have turned their attention mostly to the stall-feeding of cattle, thus consuming the most of their products upon the farm. Mr. Barnard Lynde inf[illegible] me that he had paid toll, the past winter, for [illegible] bushels of grain, which he had fed out in this

[illegible]ture of Manure.—Every material upon the farm, valuable in the manufacture of manure, is brought into requisition. Mr. John Lynde has not been able to avail himself of the advantage of a barn cellar hitherto, on account of rocks below the surface; but I believe it is his intention to alter the arrangement of his buildings so as to obviate this difficulty. His practice, therefore, has been to throw in muck, under the stable floors, to the depth of three feet, in the fall, and then in the spring it is taken out and mingled with his other compost. His yards are well covered in the fall with muck, turf, &c., and in the spring the contents are piled up, mostly under cover, remaining in this condition until the next fall, when the compost is carted out and spread as a top-dressing on moist grass ground. His arrangements for the swine are excellent, and afford a large quantity of manure.

Mr. Barnard Lynde has been more successful in obtaining a cellar. Two years since, he commenced digging for one, and opened a trench about 14 feet wide and 8 feet deep, under the whole length of the barn, (70 feet.) The earth taken out was all carted to the field and spread as a top-dressing upon a moist piece of mowing. The effect was truly wonderful,—doubling the quantity of hay. One would not have supposed that earth taken out, to the depth of 8 feet, would have produced this effect; and it certainly affords substantial proof of the benefit to be derived from barn-cellars, where the salts are annually saved and made available. The earth under this barn is remarkably free from stone, and as the cellar never is affected by frost, it is Mr. Lynde's intention to keep widening it, annually, from time to time, in the winter, by throwing the earth back on to the manure, in about equal quantities with it, until the whole is excavated. Stone posts are set under the timbers of the barn at suitable distances, so as to make all safe. He is thus provided with material, ready at hand, for compost, for some time to come, and the application of it so far, in every form, has produced highly satisfactory results. The contents of the cellar remain there until after haying, and then, at convenience, the mass is carted out into large and compact heaps, for the next spring's use.

The barn-yard is covered a foot deep with muck, sods, &c., in the fall, and after the hurry of spring is over, the contents are snugly piled, under cover, and in the fall carted out and spread as a top-dressing on the moist mowing land.

My attention was directed to a corn-field which had been dressed with a compost of muck and animal matter. Two old horses were killed in the autumn, cut up into pieces of 15 to 20 pounds' weight, and mixed in compost with about 40 loads of muck. Upon each piece of horse-flesh a little slaked lime was sprinkled as it was laid on the heap, and soon after the work was completed, a powerful fermentation commenced; early in the spring the heap was overhauled, and the animal matter was so thoroughly decomposed, that hardly a bone, of the size of a man's hand, was found remaining. This compost was applied to about 1¼ acre; and the field planted to corn, which promises now to yield a bountiful harvest.

Last season, ten or twelve stage-horses were taken in to winter. They were turned loose into a yard, with a large shed for shelter and a rack for feeding; and some 50 loads of muck were spread over the bottom to absorb their droppings. The contents of this place were piled up under the shed, in the spring, and it is now a black, free mass, of fine quality.

The horse-barn has a cellar under the whole of it, which receives the horse-manure and all the wash of the house, and into which muck, turf, &c., are thrown from time to time, and the whole is worked over by the hogs.

In these various ways, over 400 loads of manure have been made, which is now in a fine state of preservation for future use.—I have been thus particular in noticing the arrangement of these farmers for making manure, because in my estimation proper attention to this department is the very starting-post in all good farming, certainly in this region of country.

Field Cultivation.—About ten acres are broken up annually, on these farms, as deep as the plow can be made to run, heavily manured with compost and planted, one year to corn and potatoes, and the next year stocked to grass with spring grain. The compost is spread on top of the furrows and harrowed in. The crops of corn and of spring grain are always good, and in favorable seasons often very heavy. A large burden of hay is cut, filling the spacious barns completely.

A field of second crop clover particularly attracted my attention; and on inquiry, I found that it had been broken up in the fall, three years since, to the depth of 9 inches. The next spring, 40 loads of compost were spread on each acre and thoroughly harrowed in, and the whole planted to corn, the crop averaging 86 bushels per acre, by actual measurement. The next spring, 3 bushels of barley, with ½ bushel of herds-grass and 16 pounds of clover seed were sown on each acre. The crop of barley was fine, and this year the soil is completely filled with grass roots, not an inch of unoccupied space being visible, and the ground beautifully covered with the farmer's best carpet. The second crop is already fit for the scythe, and will turn out a very heavy swath.

The Messrs. Lynde are of opinion that true economy consists in sowing grass-seeds *broadcast*, with a liberal hand; and as their land is thoroughly prepared to receive it, they in return harvest fine crops, both in quantity and quality. They are partial to the use of southern clover, as an ameliator of the soil, and estimate it highly as food for cattle, if sown thickly and properly cut and cured. They were formerly in the habit of fall-feeding their mowings, but of late years have abandoned the practice; believing the cattle's feet to be more injurious than their mouths—particularly on the more recently seeded fields.

Management of Wet Land.—Considerable attention is now being paid to the improvement of their wet lands, of which they have a number of acres, the surface being quite broken into small knolls and hollows. These are levelled down smooth and the land diched and drained of superabundant moisture. The field is next planted to some hoed crop until subdued, and then laid down to grass, with a heavy seeding of herds-grass and red-top, designing to keep it in permanent mowing, by liberal top-dressings of compost. They are of opinion that this description of land may be made very productive and profitable by such cultivation.

Feeding and Care of Stock.—None but the very best of animals are kept on these farms, and the same liberality is extended to them in feeding, that the land receives in manuring. "Do well whatsoever is done," is a favorite maxim with these farmers. In consequence of this system of feeding, their two-year-old cattle are as heavy as ordinary cattle at three years old. Their working oxen are sleek and well conditioned, requiring to be fed but a short time to fit them for the shambles. Their milch cows are the best the section affords, and are well cared for, both summer and winter; and, in short, no animal is suffered to lose ground, or to remain stationary that is susceptible of further improvement. Doubtless this is the true course, and we find fully realised in the practices of these gentlemen, the doctrine so often enforced of cultivating no more acres than can be well manured, and keeping no more stock than can be made constantly to improve. In either case, if the acres begin to deteriorate in produce, the profits of labor are at once diminished; or if the stock begins to fall away, or, if growing stock, even to remain stationary, the profit of feeding is at an end.

In closing this hurried communication, I have to remark, that these gentlemen have never been wedded to old customs, simply as such, but have ever been ready for substantial improvements; and probably a good share of their success as farmers, may be attributed to the fact that, for many years, they have been intelligent and constant readers of one or more agricultural publications. Indeed, the intelligent observer, in travelling past these farms, would not need to be told of this fact; he would recognize it at once, by unmistakable, general appearances.

F. Holbrook.

Brattleboro', *August* 14, 1848.

Trench Plowing.

There has been much said from time to time about trench plowing. I have never known it to succeed to any great extent. If attempted in the summer in stiff soil, it cannot be done—the labor and expense is too great. The only proper time to trench-plow is late in the fall, when the ground is saturated with water. But I think there is no need of a trench-plow. Three good horses to a good three-horse plow will be able to turn a furrow twelve inches deep. This is the true plan to commence on. The stiff clay sub-soil, thrown up to the action of frost, is broken down, and by being thoroughly mixed, next summer, by frequent plowings, a deep soil, well fitted for the nourishment of plants, is secured. But it must in no case be plowed in summer when wet. All lands inclining to be wet, are greatly benefitted by being plowed very deep late in the fall.
Wm. Todd. *Utica Mills*, *Md*., *August*, 1848.

India-Rubber Boat.—In page 293 of your last number, an inquiry was made if boats are ever constructed of India rubber. Col. Fremont, in his expedition to the Rocky Mountains, in 1842, had one, as also in his expedition to Oregon and North California, (vide Doc. No 166 of the H. of R.) In the first expedition of 1842, the seams of the Boat were sown together, but the last, being fitted out in a hurry, the seams were pasted, but still it lived amid the storms and tempests of the Salt Lake, and the numerous eddies, rapids and waterfalls of the rivers. He says it swam like a swan upon the mountain billows of the lakes, and floated uninjured on the tempestuous torrents of the river. It could be transported with ea[illegible] and bore heavy weights. Life boats are [illegible] material, and the Gutta Percha may be u[illegible] caoutchouc. James Boyle, *Annapolis*, [illegible]848.

BUTTER-MAKING IN HOLLAND.

Editors Cultivator—As I had some dairy-farming experience in Holland, and was for a number of years manager of an extensive farm where butter was made, in the Northern part of that country, where the best article for market is produced, I thought it not unfit to give your readers a description of the way the "Hollanders" make butter, which often keeps one year or more.

We milked from 40 to 60 cows, of a breed called "Lakeveldsche," after their originator. This breed of cattle was obtained like the Bakewell sheep, by scrupulously breeding the best animals, till the highest point of perfection for the dairy was obtained. They are invariably white, with a black, cloth-like spot on the back, and down the sides; their size is equal to the Durham cows I have seen in America. The milk of these cows is generally very rich, although one animal will differ sometimes largely from another in this respect. They sell commonly for 80 guilders, ($32) each. I have often paid as high as 150 guilders for an extra milker.

Although these animals are always highly fed and well kept in all seasons, they are constantly poor while they are milked; this is one of their best qualities, as they turn everything into milk.

We took from 18 to 8 quarts of milk a day throughout the year, according to season; the highest point, and the best milk is obtained in April and the beginning of May, when the cattle get the new clover and grass. At that period, the butter is of the finest possible flavor and sells, made up in fancy figures and adorned with the first flowers of spring,

> "Whose colors quaint
> Have diaper'd the meadows o'er,"

for 50 and 40 cents (American currency,) the pound. The average price North Holland butter commands, from wholesale dealers, throughout the year, is 15 cts. per pound, American currency.

Our cows were always fed in the stable, and turned out in an open yard twice a day for exercise, and to cleanse their places by a liberal application of water and broom rubbing, of which last two articles, the Dutch dairyman is most lavish, no filth nor litter being ever allowed to remain in the stable at the time of milking.

The whole secret of making such superior, and long keeping high-flavored butter, is, according to my observation, only to be found in the most minute cleanliness in the manipulation generally, and in the utmost nicety in the keeping of the milk, cream, vessels and apartments, joined to plenty of white (Dutch) clover, and the use of salt, obtained by the evaporation of sea water.

Every morning before sunrise, the cows were fed and turned out, the dung and all filth removed, and the doors and windows opened. After airing the stable, they were placed back again, and milked, the milk, taken to the dairy-maid, was placed in shallow earthen pans (glazed inside) which stood in a reservoir of cool water, purposely let in before every milking. In the course of the day she dipped off the cream, by the aid of a flat hollow wooden dish, as often as it rose to the surface of the milk, which in no case is suffered to get [illegible] before the cream is taken off. The cream was [illegible] to large tubs, in the form of a Dutch churn, [illegible] several times in the day. I should have [illegible] the night's milk was put in the pans in the same way, and skimmed off before the morning's milk was brought in; the cream of the last being added to that of the first, the whole was suffered to get sour together. If the cream did not turn sour by itself, it was caused to do so by adding some acid cream to the contents of the tubs.*

Churning was performed by horse-power, sometimes once a day and sometimes every other day, according to the fitness of the cream; the churn apparatus was so arranged that a regular motion of the dasher could be adapted to the season of the year. After the butter was separated it was taken out, by a strainer made of silver wire, and put in a brass tray, in which it was left to harden for a few hours, in the reservoir alluded to above. When hard enough to knead well, the buttermilk was *all* pressed out, not a particle visible to the eye being left, after which the ~~dry butter~~ was salted and the salt worked in. The hand, often dipped in ice-cold water, has hitherto performed the expulsion of the buttermilk. After the salt was added, only a wooden ladle, perfectly sweet, touched the butter, and the milk-like brine which is expressed under the operation of salting, is dried off by pressing clean linen towels on the butter.

The next operation is putting the butter down in the firkin; this is made of white oak (slightly different from the American white oak, it being closer-grained,) and when destined for a sea voyage or long keeping, only old firkins, which we collected for the purpose, were used, after the same were made sweet by scalding brine. The bottom of the vessel was sprinkled and the sides rubbed with pulverised salt, and the butter packed in such a manner that no cavities nor brine ever remained in or between the successive layers; the firkin being filled, a layer of salt was rubbed on the surface, and a clean sheet of white paper placed over the salt, while the nailing on of a hollow wooden dish, completed the article for market and for transportation to any part of the world.

It is incredible to any body who has not made close observations on the subject, how easily milk is changed by the temperature, and above all, how easily it is affected by the vessels wherein it is kept, as also, how much, almost *magical* influence, the personal cleanliness of the dairy-maid has, on the article of butter produced. Dairymen who have the same stock of cattle, the same stables, the same herbage, will not produce the same quality of butter, nor get the same price in market, because the production of the one is distinguished by a pleasant, yellow, inviting color and admirable flavor, while that of the other is depreciated by a whitish, cheesy-like appearance, indifferent taste, and sometimes flabby texture. Some people, owing to a peculiarity about their person, never can make butter that will keep for a long time.

It is a rule with the dairy-women of my country, never to put milk, cream or butter, twice in the same vessel, without scalding, airing, and if possible, sunning.

I have eaten butter of our own make, that had been sent among ship stores, passed the equator to the island of Java, and was brought back again perfectly sweet and fresh.

The cows, by the construction of the stable, were divided on both sides of a floor, 26 feet wide, with large doors for a wagon loaded with green herbage or hay to drive through; before and under the head of the cattle, where troughs built of brick, for their drink and food, with a pump so placed that the water, let in the troughs, could be drained off at the opposite end. Gutters were provided behind the cows, to receive the solid and liquid excrements, which by their own gravity, and finally by sweeping and cleaning, were conveyed to a cistern, where a compost was formed by admixture of mud out of the bottom of ditches, which in Holland divide the meadows and take the place of fences. This compost was carried out and scattered over the meadows in the spring, as soon as the water, of which I shall have occasion to speak directly, is drawn off.

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* We presume it is only the *first stage* of acidity that our correspondent alludes to. An *acrid* state of the cream would be injurious.—Eds.

Meadows and pastures in Holland, are situated on what is called "*Polders*;" a polder is a surface of level land, measuring from 20 to 4 miles square, and not unfrequently 20 or 30 feet below the adjoining river, which glides in rapid motion along the embankments that protect the land forcibly against the intrusion of its boisterous waters. These embankments called "*dykes*," are kept in good repair by the joint contributions of the different owners of the polder. Rain-water is worked out by stationary windmills, also the joint property of the owners, (called "Ingelanders;") in fall and winter the rain-water is suffered to accumulate and innundate the lands, which then frequently present the appearance of a large lake. This is done in order to kill noxious weeds, and give the soil the benefit of irrigation. In March or February the water is pumped off, and the manure put on as before described. In this manner land is made to produce an abundance of fresh herbage, consisting principally of white clover, from April till September, or the same is cut twice, and made into excellent hay for winter forage, without even breaking the sod or using a plow.

The Dutch dairyman never produces grain, not even for his own consumption; his whole attention is undividedly applied to making, in the best possible style, the article for which he is so justly celebrated.

If my countrymen could be made to believe that America had such an extensive command of cheap land, adapted for the dairy business, joined to an unlimited home market for the article, they certainly would escape from the feudal vexations under which they now suffer, and, like me, seek refuge in the land where Liberty holds the sceptre, and where every one can enjoy the reward of his honest labor, without being compelled, as they are, to give up one half of their hard earnings to a reckless, profligate and squandering goverament.

I would add, that the land on which I am located is well adapted for dairy-farming, the clover and grass springing up spontaneously, after clearing; the climate is, by the elevation, (1,000 feet above the Tennessee river,) temperate; my thermometer last summer never rose above 94° in the sun, while that instrument generally ranged between 60° and 70° in the shade. The facilities by which butter can be sent fresh to the southern markets, Charleston, Savannah, Augusta, &c., secure a ready sale to any body who wants to undertake the making of it in this region.

Land can be bought here for $1.25 an acre. I bought mine from Nicholas Haight of New-York, who, I suppose would give all necessary information about the same.

ALB. C. RICHARD.

Walden's Ridge, Hamilton Co., Tenn., June 26.

PRINCIPLES OF BREEDING.

It is generally admitted that there are two modes or systems of improving domestic animals; viz., 1, crossing different varieties and afterwards breeding from the produce; and 2, selecting animals for propagation entirely from one breed. But within a few years, considerable controversy has arisen in regard to these two modes of breeding, and, as often happens where discussions are carried on with warmth, the parties have in many instances urged their arguments to extremes. On the one hand it has been held that crossing is the only safe course of breeding, while on the other it has been denied that any *real improvement* is ever effected in that way.

We do not advocate, exclusively, either mode, being convinced that each has its peculiar advantages under different circumstances, and if judiciously pursued will be productive of improvement. The most essential point is the same in both systems—that is, a proper selection of breeders. As was remarked by Prof. SIMMONDS, in his lecture before the Royal Agricultural Society, (noticed in our September number,)—"Every improvement of breed requires the application of the same means to retain it which produced it; the chief of these is *care in the selection* of stock, so as to avoid a tendency to hereditary disease [or defects.] Crossing is founded on a principle just as secure as Bakewell's system of care in selection, added to the in-and-in system."

The great breeder above referred to, (BAKEWELL,) evidently combined the system of crossing with that of breeding from one stock; for his breeding animals were in the first place selected from different breeds, but after the cross had been carried to the desired point, he confined his selections to his own herds or flocks. He formed in his mind a standard of perfection for each kind of animals, and to this he constantly endeavored to bring them. That he was eminently successful in the attainment of his object, cannot be denied.

But it has been said that "it cost BAKEWELL the labor of a lifetime and a large fortune to establish a single breed of sheep." If this were true, it might be replied—if his improvements could only be obtained at such "cost," it was time and money well spent. But is the assertion correct? The language implies that he accomplished nothing else in his "lifetime" but the improvement of "a single breed of sheep," and that in effecting this he spent "a large fortune"—both which statements we think are erroneous. His improvements in animals were not confined to sheep, but extended to horses, cattle and swine; in all which he produced stock superior to any of his time, and for their several purposes it is probable they have never been surpassed. "He was allowed," says his biographer, "to be the first breeder of horses of the age in which he flourished. * * * The different nations of Europe supplied him with *materiel*, and Nature herself might have wondered at the skill he displayed in bringing her works to a greater degree of perfection."[*] In practical agriculture, his improvements were scarcely less remarkable, and it has been said, that "no man, perhaps, during the last century, did so much towards increasing the agricultural interests of the country, as BAKEWELL." "He was in advance of the age, and we may say full half a century before any of his neighbors. * * * Dishley, [the name of his farm,] was in fact a school of *practical agricultural reform*."[†]

The expenditure of his "large fortune," [illegible] appear to have resulted from his efforts to improve his breed of sheep, or from prosecuting his other operations; but, according to the authority we have referred to, his embarrassments arose principally from another source. From the distinction he acquired, his house became the resort of great numbers of visitors from various parts of the world. His expenses were great, as "his hospitality was unlimited." "Several of the principal of the nobility were frequently his guests, and Mr. Bakewell, whose disposition was as liberal as his mind was noble, entertained them in the same expensive style as they were accustomed to live in themselves when at home."

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[*] *Farmer's Magazine*, second series, vol. vi, p. 82.

[†] Ibid p. 84.

That it required a length of time to fix and establish the improvements which Bakewell made in sheep and other animals is admitted; but considering the nature of the work, it has been well remarked, that the time he took to accomplish it, "*was incredibly short.*" He began his farming operations about 1750. At what period he commenced the improvement of sheep, we are not exactly informed. It is said that in 1760 his rams did not sell for more than two or three guineas per head. From this time he gradually advanced in terms, and in 1770 he let some for twenty-five guineas a head for the season. Marshall states that in 1786 Bakewell let *two-thirds* of a ram, (reserving a third for himself,) to two breeders, for a hundred guineas each, the entire services of the ram being rated at three hundred guineas the season. It is also stated that he made that year by letting rams, more than one thousand pounds.

In 1789 he made twelve hundred guineas by three "ram-brothers," and two thousand guineas from seven, and from his whole letting, "full three thousand guineas." Six or seven other breeders made from five hundred to a thousand guineas each, and the whole amount of ram-letting of Bakewell's breed is said to have been not less, that year, than *ten thousand pounds*.

We presume it will not be doubted that this breed of sheep was "*established*," in public opinion, at the time these prices were obtained. Bakewell died in 1795, at the age of 69.

It is true that still more extraordinary prices were obtained for the use of rams of this breed after Bakewell's death. Pitt, in his "*Survey of Leicestershire*," mentions that in 1795, Mr. Astley gave three hundred guineas for the use of a ram of this breed, engaging at the same time, that he should serve *gratis* twenty ewes owned by the man of whom the ram was hired—making for the entire use of the ram that season, four hundred and twenty guineas. In 1796 Mr. Astley gave for the use of the same ram, three hundred guineas, and took forty ewes to be served gratis. At the price charged for the service of the ram to each ewe, the whole value for the season was five hundred guineas. He served one hundred ewes. In 1797 the same ram was let to another person at three hundred guineas, and twenty ewes sent with him—the serving of which was reckoned at a hundred guineas, and the ram was restricted to sixty more; which brought his value for the season to four hundred guineas. Thus the ram made in three seasons, the enormous sum of *thirteen hundred guineas*.

We have nothing to do, at present, with the question whether the value of these animals was not exaggerated. The actual superiority of the breed over the stock of the country, must have been obvious, and this point we wish kept in mind.

This breed of sheep is continued to the present day, [illegible] has been remarked by a respected writer, that [illegible] "remain a lasting monument of Bakewell's [illegible] As to their origin, the testimony shows them to have been of *mixed blood;* though no breed is more distinct in its characters, or transmits its qualities with more certainty; and if we were without any other example of successful crossing, the advocates of the system might still point triumphantly to the Leicester or Bakewell sheep.

But what are the opinions of our best modern breeders in regard to the practicability of producing distinct breeds by crossing? Robert Smith, of Burley, Rutlandshire, an eminent sheep-breeder, in an essay on the "Breeding and Management of Sheep," for which he received a prize from the Royal Agricultural Society, (1847,) makes the following remarks:—"The crossing of pure breeds has been a subject of great interest amongst every class of breeders. While all agree that the first cross may be attended with good results, there exists a diversity of opinion upon the future movements, or putting the crosses together. Having tried experiments, (and I am now pursuing them for confirmation,) in every way possible, I do not hesitate to express my opinion, that by proper and judicious crossing through several generations, a most valuable breed of sheep may be raised and established; in support of which I may mention the career of the celebrated Bakewell, who raised a *new* variety from other long-wooled breeds by dint of perseverance and propagation, and which have subsequently corrected all other long-wooled breeds.

We might cite other evidence to show that Bakewell derived the originals of his flock from various breeds; but for our present purpose, it is not necessary to enter more into this part of the subject.

It will be admitted that the general principles which govern the propagation of animals are the same in all races, and, therefore, a system that has produced the improvement of one species may, of course be relied on for others. The writer by no means advocates indiscriminate crossing; to become a good breeder, by the practice of any system, requires a degree of judgment and skill in the selection and management of animals, rarely attained; and hence it results that of the many attempts which are made for the improvement of stock, few, comparatively are successful, and many are productive of injury rather than benefit.

But as new breeds have originated by crossing, in almost every species of domestic animals, a brief notice of some of them may be useful. We will begin with horses.

The Arabian breed, the most eminent in the world, and the acknowledged source of improvement in most other existing breeds, was in its origin, according to Col. Charles Hamilton Smith, (see *Naturalists Library*,) "*a race of great intermixture.*" The English Race-horse is admitted to have been derived from a mixture of the blood of the Turk, Barb, Arab, Persian and Spanish, with more or less of the ancient British stock. (See Low, Youatt and Smith.) The Hunters, says Low, "have been mixed not only with one another, but with every other race which seemed fitted to give the conformation and characters required. The horses of Spain, Italy, and Turkey, nay of Barbary and Arabia, have been resorted to." The Suffolk Punch, according to the authorities above quoted, was descended from a cross of the Norman stallion and Suffolk cart mare. The Clydesdale breed is said to have originated from a cross with stallions brought from Flanders and the best Lanark mares. The Andalusian, (the parents of the celebrated *canalos* of California,) were derived from a mixture of the Barbary and Spanish blood; and the highly esteemed Norman, is a cross from the Andalusian with the old Norman draught horse.

All these may be claimed as examples of the good results of judicious crossing in horses, and yet the proposition to preserve some valuable stocks which originated in a similar way, has been discouraged, on the supposition that breeding them together "would be only insuring uniformity of defects, and making them, in the end, utterly worthless"!

Among sheep, of breeds that may be called artificial, besides the Leicester, (originated by Bakewell, as before shown from a mixture of several long-wooled breeds,) we have the Cotswolds, which are a cross of the Leicester and old Cotswold, and a sub-variety of the Cotswold called the Improved Oxfordshire, which have arisen within a few years chiefly through the agency of Mr. Large, of Broadwell, Oxfordshire. The celebrated Cheviot breed of Scotland is a mixture of the Leicester with the old Cheviot stock. Some experiments are now going on in England, in reference to crossing the South Downs and Hampshire Downs with the Leicesters and Cotswolds, and Mr. Twynham and Mr. Hilliard have flocks originated by crossing these breeds which have received many prizes and have been repeatedly commended in high terms. But as these may be considered not fully "established," we only mention them.

Of cattle, we have at least two esteemed breeds—the Durham or Improved Short-Horn, and the Ayrshire, which according to the most authentic accounts, were of mixed origin.

Of swine, it may be safely said that we have not a single variety of any value that was not derived from a mixture of breeds.

In dogs, the advantages of crossing have been not less remarkable than in the animals above mentioned. Several varieties now considered distinct were originally produced by intermixture. Youatt, in his work entitled "*The Dog*," tells us that the Fox-hound is the old English hound "sufficiently crossed with the Greyhound to give him lightness and speed without impairing his scent." He tells us, also, that the Pointer "is evidently descended from the hound;" and that the Bull-Terrier is a cross between the Bull-dog and Terrier, and "is generally superior, both in appearance and value, to either of its progenitors."

A cross between the Bull-dog and Greyhound, of which he gives an account, deserves special notice. "Towards the close of the last century," says Mr. Y., "Lord Orford, a nobleman enthusiastically devoted to coursing, imagined, and rightly, that the greyhound of his day was deficient in courage and perseverance. He bethought himself how this could be best rectified, and he adopted a course which brought upon him much ridicule at the time, but ultimately redounded to his credit. He selected a bull-dog, one of the smooth, rat-tailed variety, and he crossed one of his greyhound bitches with him. He kept the female whelps, and crossed them with some of his fleetest dogs, and the consequence was, that after the sixth or seventh generation, there was not a vestige left of the form of the bull-dog, but his courage and his indomitable perseverance remained; and having once started after his game, he did not relinquish it until he fell exhausted, or perhaps died. This cross is now almost universally adopted. It is one of the secrets in the breeding of the greyhound."

Mr. Youatt goes on to relate the exploits of a celebrated bitch of this breed called Czarina, which won forty-seven matches and was never beaten.[*] This same bitch commenced breeding in the thirteenth year of her age, and two of her progeny, Claret and Young Czarina challenged the whole kingdom and won their matches. Most of their progeny proved very fleet, some of them sold for a hundred guineas each, and their blood it is said, "can now be traced in almost every good dog in the kingdom."

Of poultry, it is well known that several of the most noted varieties originated from crosses. Even the Dorking fowl, which by some advocates of "*pure*" breeding has been held in great estimation, was, many years ago, pronounced by Arthur Young, "*a bastard breed*,"[*] produced by a cross of the Malay and Poland or Hamburgh fowl.

We trust our remarks will not be misunderstood; our main object has been to show that certain breeds of animals have been produced by crossing. Other breeds—such as the Devon, Hereford, Galloway and West Highland cattle, and the South Down and Merino sheep have been improved without any foreign admixture. The expediency of crossing must be determined by circumstances; the breeder's course must be adapted to the materials at his command. Where animals of the desired form and properties can be found in the same breed, we should decidedly choose them for propagation in preference to introducing alien blood. But the breeder should have a distinct and definite object in view, he should carefully consider the means of attaining it; and with the requisite facilities, his succes will be proportionate to his judgment and attention.

The Kerry Breed of Cows.—I here give an account of the Kerry cows, as far as a short experience of the qualities of four of that breed, and the accounts I had previously heard of them, justifies me in offering an opinion. The yield of milk I consider to be quite equal in quality and quantity to that of an average Alderney, which sort I have kept, and the Kerry possesses several advantages over that breed. In the first place a Kerry is very much cheaper to buy; secondly, it is much cheaper to keep, and with less risk, being much hardier in constitution, and capable of thriving on rough and scanty pasturage; thirdly, the meat is very much better, as the carcase of an old Alderney is little more than skin and bone; fourthly, the calf, if by a bull of a larger breed, such as a short-horn, is equal in size to that of an Alderney.—*English Farmer's Herald.*

Compost Sheds.—Among the objects most worthy of our agriculturists' attention, are compost sheds; a cemented pit, roofed in, with walls on three sides. In this kind of shed manure may be economically manufactured, with as much industry and care as on a Flemish farm. These kinds of sheds are kept constantly filled with vegetable and animal refuse of all kinds, amongst which is mixed from time to time a bag of guano, to promote the decomposing fermentation; with the aid of liquid manure the mass is very soon converted into a highly exciting compost, and conveyed away either for immediate application, or to be preserved in a casing of soil, if no crop or ground be ready to receive it. Thus the manufacture is constantly going on, and guano, the most costly of imported fertilizers, is made to multiply its own peculiar properties to an incalculable amount.—*Ib.*

Top-Dressing for Grass-Lands.—Bones dissolved in muriatic acid, will be a good top-dressing for grass-lands. Boiled will be more easily dissolved than raw bones. They must be put in a vessel, wetted till they will take up no more water, and then have the acid poured over them.—*Ib.*

The Fruit Trade.—The Patent Office Report for 1847, states that the quantity of apples shipped from Oneida county, N. Y., (chiefly from four townships,) was ten thousand barrels in 1845, seven or eight thousand in 1846; and eighteen thousand in 1847. The most productive orchard, known as the Goodsell orchard, containing about six acres, yielded in 1845 more than one thousand barrels, which sold for over a thousand dollars.

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[*] Lord Orford was so enthusiastically fond of coursing, that he insisted contrary to the wishes of his friends, on riding out to witness the performance of his favorite bitch, though he was at the the time seriously ill. She won the stakes; but in the excitement and exultation at the moment of victory, Lord O. fell from his horse and almost immediately expired.

[*] "Survey of Sussex."

THE POTATO DISEASE, &c.

EDITORS CULTIVATOR—I am sorry to announce to you the undoubted existence of the "Potato Disease" among us. I have been confidently looking for its appearance for some days past, as we have had, since the 30th of May, precisely those alternations of weather which have invariably accompanied it in former years. From May 30th to June 9th, (with the exception of warm showery weather on the 3d and 5th,) the weather was almost constantly cold and drizzly. During this period (June 1st,) we had a slight touch of frost. From June 11th to 13th, inclusive, the weather was very bad, the thermometer sinking just to freezing point at night on the 13th, and the days exhibiting a dry lacerating chilly wind, that injured all tender plants very much.

From the 15th to the 19th we had five very warm days. followed, on the last day, by copious rain. On the 23d and 24th, the wind was so rough and cold as to make it necessary to cover melons, &c., wherever it was possible. This was succeeded suddenly by hot weather on the 26th and 27th.

Lastly, from July 4th to 10th, we had one continued chill, making it necessary to cover tender plants, such as melons and cucumbers, as much as in the month of May. The difference in the weather between this and the years '44, '46 and '47, when the potato disease prevailed so extensively, has been, that the changes have been much more numerous than in those years, but not quite so severe. The thermometer has not usually sunk so low, nor the wind been so lacerating to vegetation. Especially the severe chills that occurred from the 11th to the 15th of July, 1846; and again from the 11th to 21st of June, and from the 24th of July to the 3rd of August, 1847, (all of which preceded periods of potato disease,) were more severe than those of the present year.

The morbid indications on the potato now first, just becoming visible, are three: a steel blue coloring on the points of some of the upper leaves,—a rusty look on those that are lower and central in the hill, together with a single withered leaf on the apex of the plant, especially of such spires as exhibit no blossoms. This withered leaf, together with the others exhibiting morbid indication, speedily become dry.

As the depression of the temperature has not been so low, nor continued for so long a time as in former years, when the potato was diseased, so I hope the morbid appearance will not increase rapidly, but gradually yield, under mild steady weather, until a healthy action is restored to the system of the plant.

If such should be the result, the potato will live out its natural life, or nearly so; and on digging in the autumn, we shall discover only occasional traces of disease on the tubers. *Nothing is more evident to careful observers of the progress of this disease, than the fact that it does not originate locally in the tuber, but is the result of morbid secretions in the plant itself; and that hence, in point of time, the disease of the tuber follows that of the herbage.* Should it be asserted that disease has sometimes been known to succeed hot showery weather, (as is probably the fact,) when none of the foregoing morbid indications appeared, still the existence of a morbid condition of the secretions of the plant is then just as undoubted.

The *mode* by which severities of weather produce this disease is, I think, obvious. The brightness and warmth of our summers, approach very near to those of the tropics. Hence all those tropical and semi-tropical plants that mature their fruits in from 12 to 20 weeks, and do not require the highest heats of these regions, may be raised here with tolerable success, in an ordinary season. Melons, cucumbers, squashes, pumpkins, corn, beans, egg-plants, tomatoes and potatoes, are all of this class. The potato being moreover a native of the *mountains* of the tropical regions, presents itself among us already, by that fact, half acclimated.

Now, soil being left out of the account, the first requisition, in this whole class of plants, is *heat* and *light;* just as *air* and *moisture* are to our hardy ones, such as cabbage, turneps, the grasses, and the grains.

The Potato, however, requires less heat and more moisture than any other tender plant we cultivate, and so presents points of similarity to our half hardy ones.

While this class of plants enjoy steady warm and bright weather, they are sure to grow with any tolerable culture. But let sudden changes occur; as that of high and dry heats succeeded by long and damp chills, and the deprivation of their nutrimental juices is inevitable. This, attended with the laceration of foliage by the wind, and the sudden return of warm weather, producing a ruinous perspiration from the foliage before the earth is warm enough adequately to restore the circulation of the plant, finishes the work of death. Any or all these causes occurring in mitigated forms and degrees, produce proportional results of unfruitfulness and disease. In such ways the vital force of the plant yields to the stronger influence of chemical action.

Had those who have speculated on the causes of the potato disease cultivated the small list of tropical plants noticed above, though but for a single unfavorable season, side by side; and had they at the same time, heeded the well ascertained physiological laws of tender plants, they would, I think, have come unanimously to this single and simple conclusion, *that all tropical plants cultivated here, suffer usually and mainly from infelicities of weather, especially damp chills; and that the morbid indications in this whole class of plants are as nearly the same as the difference of foliage and fruit will permit.* Hence I would as soon talk of *Tomato*, or *Melon*, as of *Potato* disease. The only peculiarity in regard to the potato, is the recency of its marked liability to disease. Indeed, such are the unalterable laws of vegetable physiology, that had we a minute history of the potato, as cultivated a century ago in our own land, we should, I doubt not, find frequent slight traces at least of its present morbid manifestation.

But I did not intend now to write an essay on this subject. Let those who would see the illustration and proof of the foregoing positions consult a treatise on the subject, contained in the "Transactions of the New-York State Agricultural Society, for 1847," now just published.

July 22nd. The indications of disease on the herbage of the potato, is now everywhere apparent; although its progress has been much less rapid than in 1846, or the second attack in 1847. On the day of the preceding date, (July 14th,) we had a shower of rain followed by chills and wind of considerable severity and continuance, so that I feared they would enhance the morbid tendencies pre-existing.

August 8th. Under the last preceding date, we enjoyed a fine warm rain succeeded by cool, but not cold weather. Under its influence, the influence of disease seems clearly lessened; while those leaves that had become steel blue or rusty, are dying; the others look healthful.

I have planted about three acres of potatoes on a gravelly loam, a little richer than was desirable, as it has induced too great rankness of herbage. It is here, I conceive, that my principle danger of disease lies.

The field had been a pasture for some years. It was turned over by the plow last November. My seed was planted from April 28th to May 2nd, inclusive. The seed was put in between the furrows with a grub hoe, from 4 to 6 inches deep, and the whole field immediately harrowed both ways. I have hoed it twice, making no hill at all, but leaving the ground clean and mellow about the plant.

The whole field appears now as though moderately hilled, from the upheaving of the soil during the formation of the tubers. I have found no trouble from my potatoes rising out of the ground as my neighbors feared.

In cases of the rapid progress of disease, I have formerly mowed off my vines to prevent the transmission of morbid matter formed and forming in the herbage, to the tuber. But the disease has advanced so slowly this year, that I have not done this. My varieties are all early, but the process of maturity has undoubtedly been a little hastened by diseased tendencies.

August 11th. Have just discovered a slight discoloration on two or three tubers, enough to warn me of the possible rapid approach of others in the rear. The drying up of my potatoes, is evidently in steady, though not rapid process.

THE NEWBURGH EXPERIMENT ON THE POTATO.

In the New-York Spectator for July 3rd, I see the notice of an experiment on the potato, communicated to the Executive Committee of the State Agricultural Society, at its recent meeting at Buffalo.

In that experiment, potatoes were planted in a very deep rich soil, in a forcing house, kept at as even a temperature as possible, without the use of artificial heat. Yet when the potatoes were dug, about three weeks before, (that is, as we may calculate, about the 1st of June,) they exhibited signs of disease. Hence the inference is drawn *that sudden alternations of temperature, or varying conditions of moisture, have no agency in the production of this disease.*

But let us see.

1st. The cultivator shut up a mountain tropical plant in the necessarily *close air* of a green house. This was probably done about the 1st of March. The plant therefore, could have had but very little fresh air during the first two months of its growth.

2nd. He planted it in *a very deep rich soil*—a soil in which every familiar cultivator of the potato knows it will not do well, since it will scarcely form tubers at all.

3d. He planted a vegetable accustomed to a cool mountain air, in the necessarily *hot atmosphere* of a green house. In such a house, the temperature would almost unavoidably, in cold and bright days in the months of March and April, run up to 100°. These circumstances—a close air, rich soil,—and hot atmosphere—are the very predicament in which tropical plants are most likely to suffer.

Altogether, I consider the experiment a most unfortunate one, and the inference drawn from it as a perfect *non sequitur*. I am not practically acquainted with the management of *forcing houses*, either with or without artificial heat; but I have cultivated *hot and cold beds*, for the last fifteen years, and a part of the time, almost by the acre; and I have yet to learn that any plant that will admit of cultivation at all in our atmosphere, can be carried through its whole progress to maturity as healthfully when thus protected as when it is permitted the enjoyment of open culture through at least a part of its course.

The physiology of the potato disease, whether viewed in relation to this single species, or to the whole class of tropical and semi-tropical plants, seems to me not to present any profound questions or inscrutible phenomena. The *recency* of its seizure on the potato is the most difficult question, and that I think is satisfactorily discussed and referred to exhausted energy in the essay just referred to.

Diseased indications in other, especially tender plants—the Season, &c.—The months of July, and of August thus far, have been very similar to that of August, 1847. The coolness, dampness and darkness have been without a parallel in some years. The season has been exceedingly like that of the north of Europe, so far as I know it descriptively.

The temperature has ranged during the day from 55° to 75° (rarely 80°) and during the night from 50° to 60°. The consequence is, that the aspect of autumn shows itself prematurely; nor do I believe that any degree or continuance of good weather will restore the aspect of nature to its wonted appearance at this season of the year.

1. HARDY PLANTS.

Asparagus, Spinack and Pie-plant have been abundant.

Onions have suffered somewhat from a cool midsummer, the bulbs exhibiting a tardiness in forming.

Parsneps and *Peas* have done well, the last showing little tendency to decayed pods as formerly when potato disease existed.

2. HALF HARDY PLANTS.

Beets are good.

Cauliflowers started well and formed some fine heads, but now scatter badly, considering the coolness of the weather.

Cabbage, Early, has been unusually good,—a little more injured by insects than formerly.

Cabbage, Late, has done well with me, but in my neighborhood has suffered severely and extensively from the formation of turnep-shaped appendages on the roots.

Carrots, Lettuce, Radishes and Turneps, have done well.

3. TENDER PLANTS.

These have all been backward in growth, but especially in fruiting, except in cases of extraordinary protection from the coolness of the summer.

It is well known to the cultivators of tropical fruits and plants in this climate, that in cool and unpropitious seasons, their blossoms either do not fructify at all, or if they do, that the fruit drops off prematurely. Thus it was through the whole month of August, in 1847, and thus it has been during the present season.

Beans, Bush.—These have rusted badly in the foliage, but less than in 1846 in the fruit.

Corn, that was planted early in deep warm soil, has sustained its verdure and continued its growth notwithstanding summer chills. It has thus illustrated the law that vegetation that is deep rooted, and that has mostly formed its tissues, stands cold weather much better than that which has done neither.

But early corn exhibits ears few and small.

Cucumbers.—This is the hardiest of all those vines usually planted in the garden, and especially in the power of its herbage to live through damp and chilly weather, and to fruit under similar circumstances. But it commenced fruiting late; and specimens marked for seed early in July, were ruined by the long continued chill that immediately followed; while the younger crop of fruit then gathering, became stunted, pale and bitter and so unfit for market.

Egg Plant.—My plants were moderately early. A few flowers fruited during a few auspicious days in July; otherwise the whole usual season of fruiting, thus far, has been too cold for that delicate process.

So it was in 1847. Plants that did not fruit before the 24th of July, did not fruit at all, although the herbage was large and fine. A large portion of the fruit of this crop rotted in 1846, in exact coincidence of time and appearance with the potato disease.

Green Fleshed Melons.—The foliage of this vine has suffered less than in 1846 and '7, in consequence of the higher range of temperature during a chill, and the less violent character of the wind; but the process of fruiting has suffered much more than in these years from the almost uninterrupted continuance of cool weather. A few fruits set late in June, but scarcely any since, until within these last few days. So it was last year during the whole month of August. A few gentlemen about me who have melon beds in highly sheltered situations, especially such as enjoyed the aid of bottom heat arising from large compost heaps, have done better.

Water Melons.—This is the tenderest of all melons. Early plants that were forwarded in hotbeds, looked well to the end of June and set considerable fruit. But they are now nearly all dead, root and branch. A few cold bed plants transplanted with entire safety, are but just alive now, and without the aid of a long and warm autumn, must entirely fail as a crop.

Peppers.—These exhibit some fine fruit set early. Others are now just setting, but between these there are few that are intermediate.

Squashes, Summer.—This squash sets in unfavorable weather almost as freely as the cucumber, but in the *growth* of its fruit it is the tenderest of all vines. Almost all my early specimens perished by rotting at the extreme end, by becoming covered all over with small carious spots, or by becoming prematurely ripe and stinted. There is no more delicate exponent of good summer weather than the rapid and healthful growth of the fruit of the summer squash.

Squash, Winter.—This, though hardier than the preceding, will probably be a failing crop. I expect to see the fruit present in autumn, (as in 1846 and 1847,) small carious spots on its surface, gummy exudations of an offensive smell all over the skin, and (as would be expected) a tendency to early decay.

All this again is the result of sudden changes of the weather at critical periods in the growth of this plant.

Tomatoes.—I had about 700 hills that began to mature fruit about the middle of July. All the first ripe fruit for nearly the first ten days was unfit for market. By the 25th they were in fine bearing, when they suddenly received a most violent shock from cold weather, so that on the first of August nearly every hill was defoliated in the centre almost as badly as on the 10th of September ordinarily. My fear was that, in these circumstances, they would, as in some former years, die outright. But they now seem to be a little revived, so that they begin to throw out young shoots from the naked branches in the centre of the hill. The market gardeners have long been in the habit of importing a few early tomatoes, from the city of New-York. But never before have I seen the spectacle of the Utica market supplied with imported tomatoes almost to the middle of August.

5. HARDY FRUITS.

Apples are few this year generally.

Pears, with me abundant for my trees.

Plums—not one to be found.

Quinces, so far as we raise them at all, are abundant.

6. TENDER FRUITS.

Grapes.—Those that were covered during the winter are in fruit. The springs of 1847 and 1848, unlike those of many preceding years, exhibited no frosts sufficient to cut off grapes after the buds broke.

Peaches.—None.

I ought to observe that the preceding doleful account of the season, especially in regard to tender plants, requires some abatement on account of the unusually bleak exposition of my garden. But with this slight qualification, it will hold true of Oneida county generally for the present year.

It is important to compare the preceding morbid indications, in the culture of tender plants generally, with that of the potato particularly. From such a comparison, it will appear that *the state of weather that precedes the potato disease, simultaneously, similarly and usually equally, precedes a diseased condition in every other tender plant usually cultivated among us, the soil, time of planting, care in the culture, being substantially the same in each case.*

If such be the fact, how can we avoid the conviction that similar causes of disease, be they what they may, are in action in each case. C. E. G.

Utica, August, 1848.

Answers to Inquiries.

EARLY-CUT HAY.—"Does early-cut hay, when fed to cows, prevent or lessen their difficulties in calving or cleaning?" This question is asked by a correspondent at Clarendon, Vt., who states that for several years past, he has fed his cows in the winter on hay cut chiefly in the month of September. He states that the cows have generally been in good order in the spring, but that they have frequently had difficulty in calving. He has given them rye meal, which has proved useful; but beans, mixed with corn meal, and wet up together, have been most effective in causing the cows to cleanse well. In answer to the above question, we think most dairymen will agree that early cut hay is better for cows than that which is ripe. Hay from green grass, keeps the animal system in a more natural condition; it prevents that tendency to constipation of the bowels, which at the time of parturition is very likely to produce fever, and lead to the difficulties mentioned.

BED-BUGS.—"A SUBSCRIBER," Granby, Ct. To prevent these troublesome insects, use bedsteads that have no holes through them, and which screw together so tightly as to leave no cavities; use board slats instead of cords; and if there is any appearance of bugs, apply corrossive sublimate and cheap rum, whiskey, or alcohol, to the places where they are likely to lodge themselves. It may be applied with a feather, and once a week will answer. If the bugs come out of the wall or floor, set the bedstead where it cannot come in contact with the wall, and occasionally use the above solution around the bottom of the posts and on the floor where they stand.

SPECIMEN OF MUCK.—S. W., North Easton, N. Y. The muck, of which you sent a sample, would probably prove useful as a fertilizer on the soil you describe.

"ARGILLACEOUS EARTH."—S. W. The sample sent contains much sand, a little alumina, and a little iron—no lime. It might be of some service on a loose, sandy or gravelly soil.

EXTIRPATION OF COUCH OR QUACK GRASS.—S. W. Work the ground thoroughly when it is moderately dry. A spring-tooth horse-rake, with large teeth has been used for cleaning out the roots and gathering them into piles, with good effect.

BEST TIME FOR SETTING OUT AN ORCHARD.—S. W. In general, we should prefer spring; but if the ground is dry and not liable to be thrown by frost, fall planting does very well.

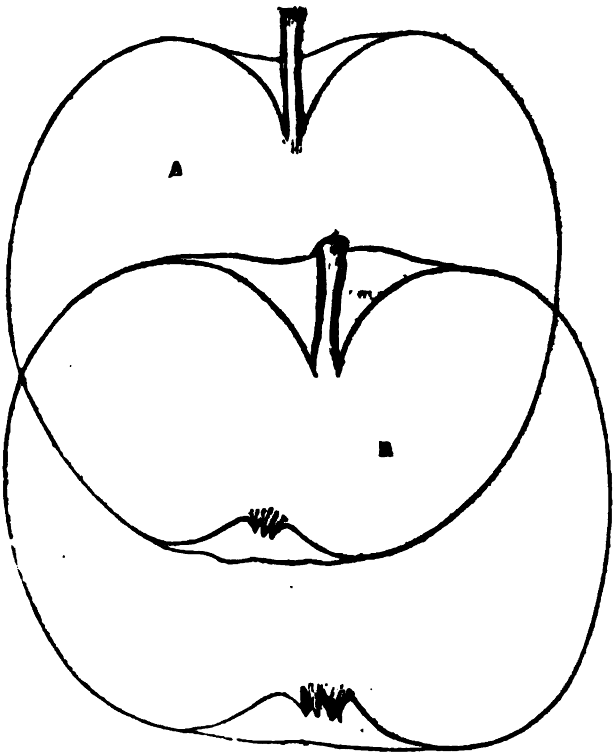
HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

New & Newly Introduced Apples.

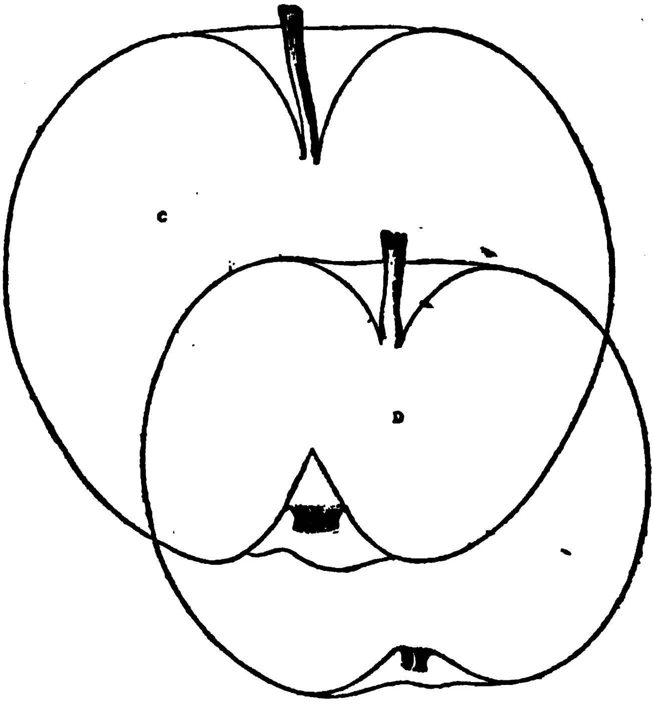
EARLY WINTER APPLES.

Mother.—A new, handsome late autumn and early winter apple, of the highest quality. It originated at Bolton, Worcester county, Mass. It is large, oblong-ovate, slightly approaching conical, obscurely and obtusely ribbed; surface a high, warm rich red on yellow ground, a deep red to the sun, in obscure streaks; stalk three-quarters of an inch long, in a moderate cavity; calyx in a small plated basin; flesh yellow, more so towards the outside, tender, moderately juicy, rich, very spicy, mild sub-acid or nearly neutral flavor, with some admixture of sweetness. This variety approaches somewhat in external aspect, the Esopus Spitzenburgh, and has the rich yellow flesh and spiciness of that celebrated fruit, but is far less acid.



A. *Mother.*—B. *King Apple.*

King Apple.—Cultivated in Cayuga and Tompkins counties, but not widely spread. Fruit large, roundish, flattened at ends, nearly regular; distinctly striped and dotted with a dark, rather dull red, on a yellow or greenish yellow ground, the whole color possessing a remarkably rich appearance; stalk from three-quarters to an inch long; calyx in a round, slightly waved, or nearly even basin: flesh yellow, remarkably tender, very rich, spicy, sub-acid, of first rate quality. Where known, it commands as high a price in market as any other apple of its season. Growth upright, vigorous.



C. *Hubbardston Nonsuch.*—D. *Fameuse, or Pomme de Neige.*

Hubbardston Nonsuch.—This apple, although it has been cultivated many years in Massachusetts, has not yet been extensively disseminated throughout the country. It is described by Manning, Kenrick, and Downing. It originated at Hubbardston, Mass.

Fruit rather large, roundish-ovate, tapering somewhat from the middle each way, nearly regular; skin marked with broken stripes and numerous dots of light yellowish red, on a rich yellow, or orange-yellow ground; stalk scarcely an inch long, in a moderate acute cavity; calyx in a ribbed basin; flesh yellowish white, compact, moderately fine grained, with a remarkably rich, slightly sub-acid flavor, with a strong mixture of a rich sweet. One of the first among first-rate apples—about equal to the Swaar as a winter table apple, and decidedly superior in flavor to the Baldwin.

Fameuse, or *Pomme de Neige.*—Downing remarks that this is "a very celebrated Canada fruit, which has its name, (*Pomme de Neige*, or Snow apple,) from the snow-white color of its flesh, or, as some say, from the village whence it was first taken to England." Perhaps it may be regarded as strictly an autumn apple, although in northern latitudes, it keeps well into winter. It is known to a limited extent throughout the country.

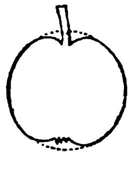
Fruit of medium size, sometimes rather small, round, even, and regular, rarely flattened at the end; color a fine deep clear red, with indistinct stripes on a whitish ground; stalk quite slender, three-quarters of an inch long; in a rather small cavity; calyx in a small, wrinkled basin; flesh remarkably white, often with faint streaks of red, breaking, juicy, very fine in texture, pleasant, slightly spicy, sub-acid flavor. Distinguished for its pleasant and agreeable qualities more than for its richness. First rate.

Analysis of the Forms of Pears.

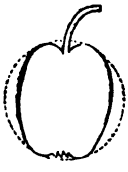
The second number of that splendid and valuable work, the Transactions of the Massachusetts Horticultural Society, contains a very interesting and valuable paper, consisting chiefly of figures, on the "Analysis of the Forms of Pears." We have taken the liberty, however, in one essential instance, to change the descriptive phrase applied to them, which we shall point out.

Although these figures nearly explain themselves, it may be remarked in the language of J. E. Teschemacher, the author of the article referred to, that "the analysis is performed by means of a simple fundamental figure of a circle, on the variations from which, combined with different pyramidal forms of the pear, the descriptions are founded; and in order to exhibit these distinctly, the original circle, when not a portion of the outline of form is delineated by dots." It is also observed that there are examples where the irregularity in the forms of pears is such, as to preclude rigid accuracy in the application of these principles. The remark is added that "the same forms and explanations may also be used in descriptions of the apple, with the substitution of *pyramidal* for *pyriform*; and with the observation that the small end of the pyramid in the apple is at the calyx, while in the pear it is at the stem."

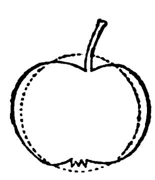
The instance in which we have deviated from the language of the original, in copying these figures, and their explanatory phrases, is in substituting the term *oblate for obovate*. We should not have presumed to make this change were we not borne out both by the ordinary definition of the term, and by the universal usage of naturalists as well as pomologists. The term *ovate*, as is well known, implies egg-shaped, or an oval smaller at one end; *obovate*, has the position of the larger and smaller end reversed. Thus, in botany, an ovate leaf is like the longest section of an egg, the larger end being at the base, as in the beech and balsam poplar; it is obovate when of the same shape but larger at the apex, as in the alder and spice-wood. Hence, also, a pear is ovate when the stem is at the larger end; and obovate, when at the smaller. But in the article from which we have copied these figures, the term *obovate* is applied to fruit designated as *oblate* or *flat*; a change in its common meaning so great, that we are puzzled to account for the deviation. A similar application of the term in botany would cause the leaves of such plants as the *Asarum canadense* and *Heteranthera reniformis* to be described as obovate, totally different from all usage. Hence, in deference to usage, we have presumed to restore the term, and apply oblate and its combinations, to such fruits as are flattened at the ends.



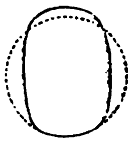
Globular.
Cross.
Bleecher's Meadow.



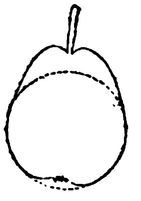
Ovate.
Croft Castle.



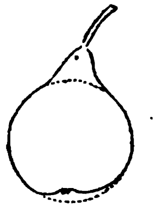
Oblate or Flat.
Gansel's Bergamot.
Fulton.



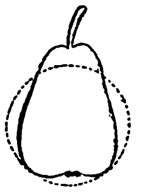
Oblong.
None.



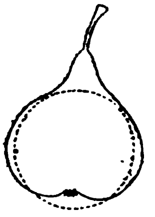
Obovate.
Buffum.
Doyenne.



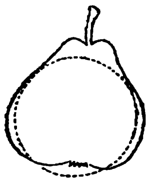
Globular-acute-pyriform.
St. Ghislain.
Capiaumont.



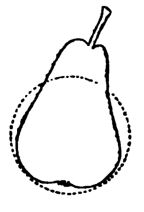
Obovate-pyriform.
Washington.



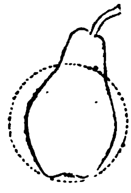
Oblate-acute-pyriform.
Beurre Bosc.



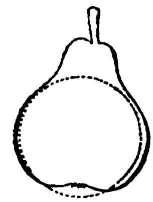
Oblate-obtuse-pyriform.
Winter Nelis.



Oblong-pyriform.
Van Mons' Leon Leclerc.



Oblong-ovate-pyriform.
Vicar of Winkfield.



Oblong-oblate-pyriform.
Bartlett.

The principle, however, of referring the multitude of different forms in the pear to so simple a figure as the circle, and describing their variations from this figure by simple and appropriate terms, which appears to be entirely new, we regard as a very valuable suggestion. It will serve to point out, with clearness and brevity, some forms which would otherwise require many words. For instance, the Vicar of Winkfield partakes of the character of oblong and pyriform, and it has the slight taper towards the calyx exhibited in the figure of the "ovate" form; hence this is at once expressed by the compound term, "oblong-ovate-pyriform."

Onondaga or Swan's Orange Pear.

We notice, in the last number of the *Horticulturist*, a statement of H. H. Crapo, of New Bedford, that this pear fails to make a good growth when grafted or budded on the quince, whether single or double-worked; and that in every instance the trees presented a weak and sickly appearance, while those on pear stocks were vigorous, more rapid in growth and very healthy.

We are satisfied that the success of some varieties of the pear depends as well upon other circumstances, as upon the nature of the variety. The writer has trees of the Onondaga budded directly upon the quince, which have made as vigorous a growth the present season as on the pear, or as any other variety out of 50 sorts, except the Genesee and Louise Bonne of Jersey, the shoots averaging from two and a-half to three feet in length. On the other hand, some varieties famed for their success upon the quince, have nearly or totally failed; some which succeeded perfectly last year, have made but little growth the present; the leaves have turned pale, and copious applications of copperas water and of iron filings at the roots have failed to restore them. These effects may perhaps be ascribed to the season, or to the soil, although all such explanations would be conjectural. The soil is sandy or gravelly loam, which never cracks by baking; and the season, although moist, warm, and producing a rapid growth with most trees, has been unusually attended with what is called the "*leaf*-blight," in the pear and plum.

Pomological Convention at Buffalo.

This convention, called together through the exertions of the officers of the N. Y. State Agricultural Society, and of the Horticultural Society of Buffalo, assembled on the first ultimo, and extended its sessions through the 2d and 4th, occupying three days in all. Fear had been entertained that at so early a season, but few fruits could be collected; a large number, however, were received from several different states, and among them many varieties ripening so early as to be usually excluded from our autumnal exhibitions. In other respects, the convention may be regarded as a very successful effort, and has resulted in the interchange of much valuable information.

Among the principal contributors were noticed the following:—Robert Manning, Salem, Mass.; Charles Downing, and A. J. Downing, Newburgh, N. Y.; F. W. Hayes, Newark, and Thomas Hancock, Burlington, N. J.; David Thomas, Aurora, W. R. Smith Macedon, and Ellwanger, Barry & Rowe, and Bissel, Hooker & Sloane, Rochester, Benj. Hodge, and A. Bryant & Sons, Buffalo, N. Y.; F. R. Elliott, Cleveland, Ohio; George Andrews, Montreal; James Dougall, Amherstburgh, C. W.; A. C. Hubbard Detroit; all of whom presented large and interesting collections. Charles Hamilton, of Canterbury, Orange county, N. Y., sent to the convention a large and very fine assortment of plums; and several other smaller collections were received, among which were those of J. W. Bailey, of Plattsburgh; L. F. Allen, Black Rock; N. Goodsell, Greece, N. Y., and others. The most interesting and important varieties in these collections, were taken up, and occupied the time of the convention during its several sittings

The number of delegates in attendance was between fifty and sixty,—from the states of Massachusetts, Vermont, Connecticut, New Jersey, New-York, Pennsylvania, Ohio, Michigan, Indiana, Illinois, Wisconsin, and Missouri, and from the two provinces of Canada—fourteen states and provinces in all. The convention was organized by the appointment of David Thomas, of Aurora, N. Y., as President; three secretaries and ten Vice-Presidents, from as many different states and provinces. A set of rules, for the government of its deliberations, was adopted by the convention, the substance of which was as follows:—The most perishable fruits to be examined first, and to be brought to the notice of the convention by a committee appointed for that purpose—one variety to be examined at a time, and comparisons made from the different specimens present;—members allowed to state facts only in the briefest manner. Discussions on special subjects to be allowed during evenings and intervals, at which no one to speak more than ten minutes, nor twice on the same subject. The pomological rules adopted by the New-York State Agricultural Society, were also adopted by the Convention. Committees were subsequently appointed to examine and report on the seedling or new fruits present.

Among the more active members who participated in the discussions, were Thomas Hancock and F. W. Hayes, N. J.; Wm. R. Prince, Flushing; Charles Downing, Newburgh; Dr. H. Wendell, Albany; P. Barry, J. W. Bissell, and N. Goodsell, Rochester; B. Hodge and W. R. Coppock, Buffalo; J. J. Thomas, Macedon; L. F. Allen, Black Rock; all in New-York; F. R. Elliott, Cleveland, and H. H. Coit, Euclid, Ohio; J. D. G. Nelson, Fort Wayne, Indiana; J. C. Holmes, Detroit, A. T. Prouty, Kalamazoo, Mich.; J. A. Kennicott, Chicago, Ill.; Thomas Allen, St. Louis, Mo.; C. Beadle, St. Catherines, and James Dougall, Amherstburgh, C. W.

With a single exception of a fruit convention held last year at Columbus, for the state of Ohio only, this appears to have been the first attempt of the kind ever made in this country. It was of course to be expected that in so untrodden a path, some time would be consumed in settling preliminaries, and in adopting the best mode of action. Difficulties existed, perhaps inseparably connected with a convention of this nature, which occasioned some confusion, and which are well worthy the attention of those having the control of future meetings of this kind. In all deliberative bodies, it is absolutely essential to preserve order. But specimens must be selected from large collections while the discussions are going on—and if members are to speak *understandingly* of these, they must "*cut and try.*" If fifty delegates are present, it evidently becomes a matter of extreme difficulty to prevent noise and confusion—more especially if they give way to the strong temptation to converse with each other, instead of always addressing the chair. We know of but one way to prevent effectually this evil, where the convention may consist of more than ten or twelve persons, although an energetic chairman, by constant effort, may do much to lessen it. This is, to devote one room to the exhibition of the fruits, and another to the use of the delegates. The fruit room, during the hours of session, only to be entered by a committee of selection, who are to be well acquainted with what is on hand, and single varieties, selected from all the different collections when they are to be found, presented at a time to the convention. The specimens, if practicable, should be sufficiently numerous to enable each member to taste, and should be placed on accessible tables for this purpose. No provision of this kind was made at Buffalo, and the consequence was, that those who had loud and clear voices usually made themselves heard by the reporter, even at those more noisy periods when a dozen were engaged in examinations and private conversation at once. The disscussions, and statements of facts, were, to fruit cultivators, in the highest degree interesting. Some of the conclusions reached we give below:—

PEACHES.

Early Barnard.—A good, very hardy, and productive peach, known in many parts of Western New-York under the name of Yellow Alberge, and in some instances as Yellow Rareripe, but quite distinct from either, and much superior to the European Alberge.

Cooledge's Favorite. Late specimens were presented, and it was decided by all who are acquainted with it, to be first rate in quality.

Jaques' Rareripe, (one of the largest yellow peaches known,) was unanimously recommended as "a fine large Early peach, but not of the highest quality in flavor." Nearly the same verdict was given in relation to

Crawford's Early, a remarkably showy variety, specimens of which were presented measuring nine and a-half inches in circumference, with a statement by F. R. Elliot, of Cleveland, that he had measured some the present season *eleven inches* in circumference.

Haines' Early Red, from different sources, was considered by a part of the delegates, as identical with the *Honest John*, or *Large Early York* of New-Jersey, while others regarded it as distinct; but all voted it a first rate variety.

The *Early Malden* peach, a new seedling, was presented by James Dougall, of Amherstburgh, C. W., having been kept two weeks in ice. It promises to be an acquisition of the highest value. It is of good size, red, very free from the stone, of excellent flavor, the leaves glandular, and it ripens about the time of the serrated Early York and Early Tillotson. It has borne three years.

The *Snow peach* was decided to be a first rate variety for preserving, but the convention was divided as to its other merits, some regarding it as first rate and others as only second rate, for the table.

The *White Imperial*, received a unanimous vote, as the *Oldmixon free*, and the *Large Early York*, of N. J., fruits of the first quality.

The *Royal George* peach was decided to be unworthy of general cultivation, on account chiefly of the mildew of its leaves and branches.

NECTARINES.

James Dougall, of C. W. presented specimens of the *Large Early Violet* nectarine, a rare variety, distinguished by its superior size from the common Early Violet, and of fine quality.

The *Downton* nectarine, from A. J. Downing, which has so high a reputation for excellence, proved to be of the very highest character.

PEARS.

The following eight varieties received the unanimous vote of the convention as pears of the first quality, and worthy of general cultivation:

Dearborn's Seedling,
Tyron,
Rostiezer,
Golden Bilboa,
Bartlett,
Louise Bonne of Jersey.
Beurre d'Aremberg,
Glout Morceau.

Dearborn's Seedling was commended, not only on account of its high flavor, but for its uniform excellence in all places and under all circumstances, although its quality is diminished when it overbears, to which it is liable.

The Tyron, fine specimens of which were sent to the convention by W. R. Smith, of Macedon, N. Y., was placed among the best summer pears. It was decided by the Philadelphia Horticultural Society, to be superior to Dearborn's Seedling.

Stevens' Genesee was pronounced, nearly unanimously, to be *among* first rate pears;

Beurre d'Aumalis, as second rate in flavor, but worthy of cultivation in large collections on account of its size, fairness, productiveness, and free growth;

The *Andrews*, as nearly first rate;

The *Marie Louise*, for general cultivation, but not unanimously;

The *Cushing*, as second rate;

The *Bezi de la Motte*, and *Julienne*, as unworthy of general cultivation.

The *Washington*, although according to the statement of Thomas Hancock, decided at Philadelphia to be superior to Dearborn's Seedling, was pronounced by the convention to be not fully first rate.

The *Bloodgood* was voted to be one of the best summer pears. On light soils it was found to be invariably fine, but several statements were made to the convention where its flavor had proved inferior on heavy soils, while others were given, where on such soils it had been excellent.

The *Brown Beurre* and *Orange Bergamot* were pronounced unworthy of cultivation.

A specimen was presented by Dr. H. Wendell, of Albany, which excited great interest, and which was believed to be the genuine Beurre Spence. The tree had been received as such, four years ago, from Thomas Rivers, of Sawbridgeworth, England; the fruit was wholly different from any other variety known, and although unripe, had a very promising appearanee.

PLUMS.

The following varieties of the plum were decided to be first rate:—

Purple Favorite,
Red Gage,
Washington,
Green Gage,
Imperial Gage,
Jefferson,
Bleecker's Gage.
Red Diaper,
Coe's Golden Drop,

La Royal and *Smith's Orleans*, were recommended as nearly first rate. *White Magnum Bonum* or *Yellow Egg*, first rate for the kitchen, and third rate as a table fruit. *Diamond*, as third rate.

[A notice of the examination of apples we are compelled to defer till next number.]

In the evening of the last day of the convention, an address was given before the Buffalo Horticultural Society and the delegates in attendance, by David Thomas, President of the Convention. It was deeply interesting and of a highly practical nature, richly illustrated from the mature observations and long experience of the speaker. As this address is to be published, we may notice it more fully on a future occasion.

The following evening, a large audience assembled to hear an address on Horticulture from Gen. Dearborn, of Massachusetts, formerly President of the Massachusetts Horticultural Society. The address was wholly extemporaneous, and was what was to be expected from his distinguished talents and eloquence. The progress of Society, from its rudest forms, and in the earliest ages, through the various gradations to the more refined civilization, was vividly traced; the early history of this progress in our own country was given; a picture of Buffalo was presented, as it was when visited by the speaker thirty-five years ago, when only *ten* buildings stood on the ground now occupied by 45 thousand inhabitants, and its entire commerce consisting of three batteaux; the rapid progress of horticulture of late years was shown, and the fact stated that more had been attained during the last five years, than in all the previous period since the settlement of the country. At Boston, where within the age of middle-aged men, the more common apples, pears and plums, were only raised, there are now establishments embracing more than a thousand different bearing varieties, and which send their products into all the different states of the Union, and to nearly every country of Europe. The exalted nature of horticultural pursuits, and the high perfection of civilization indicated by their cultivation, were strongly exhibited, with its influence in promoting the arts of peace, domestic enjoyment, and freedom.

Peaches at the South.

A Mobile correspondent of the *Horticulturist* states some very interesting facts relative to the culture of early peaches at that place. The Early Tillotson, the second year after transplanting, bore ripe fruit on the tenth day of sixth month, (June,) and he thinks "they will be as good as could be desired." The Early Yorks were ripe the 20th of the same month, and were "splendid." This is two months earlier than in central or western New-York. Would not an orchard of peaches, say a thousand acres, within a few days, by steamer, of New-York city, that would furnish us fine fruit as early as the usual strawberry season, be a very profitable investment to the cultivator, as well as a great addition to *our* comforts?

The Yellow Harvest apple at the north, is rather earlier than the earliest peaches, but we infer from a notice of the same correspondent, that it does not ripen there as soon as the Tillotson and Early York peaches, or, in other words, the difference in climate does not so much affect its time of maturity.

Destroying Rosebugs.

I have got my *Cultivator* for August, and am not a little amused with "Hampden's" mode of killing rose bugs with "an old warming pan" filled with live coals. He would get tired of such a tool if he were working in a vineyard by the acre. He will find an easier mode of destroying them given on page 254 of the 2d vol. (new series) of the *Cultivator*,—but a better yet I think I have discovered during the past year; which is to cover the ground with straw or refuse vegetable matter. I covered about a third of my vineyard with drift stuff from the river shore—leaves, reed-grass and chip dirt, spread about three inches deep on the ground, and where that was done, there was not one-tenth as many bugs as in the rest of the vineyard. If it had been well filled in with ashes, it might have been better yet, but my object in putting it on, was the hope of benefitting the vines. The effect on the bugs was unexpected. Yr's, H. W S. CLEVELAND. *Burlington, N. J.*

Thoughtlessness.

A gentleman of our acquaintance in the country, built a few years since, a large and fine house, costing three thousand dollars. He subsequently was occupied in laying out and planting the grounds, and we ventured to suggest to him the propriety of setting out fifty or a hundred ornamental trees or shrubs, tastefully arranged about his dwelling. "O, he could not *afford* it!" His grounds were to be wholly planted with *fruit trees*, all in rows, particularly the front of his house. Now, we know nothing more pleasant than an abundant supply of fruit—but the inconsistency was the expenditure of from three to five hundred dollars to give an ostentatious finish to his house, and then declining to pay one hundred in purchasing, planting and tilling its immediate environs, in a manner somewhat in accordance with the rest of his operations. Why is so much reliance placed on building—so little on tasteful planting? A retrenchment of a sixth part of the cost of the house, ($500,) would scarcely have been felt or noticed;—the application of one-sixth of this fraction ($83) in judicious planting, would have made almost a little paradise around it, and contributed more to an air of comfort, respectability and beauty, than any amount of architecture without it, or with only four straight rows of plum trees.

The Best Hardy Grapes.

It would appear that the grape is peculiarly liable to changes of quality with country and locality. In the Catalogue of the London Horticultural Society, our finest native varieties do not receive much commendation. The Bland, the Elsinburgh, the Isabella, and Catawba, are all pronounced "*bad;*" nor is any other American sort more highly commended. Now we all know that these identical varieties, when well ripened in this country, are generally regarded as delicious; and when the facility of their cultivation, in comparison with most of the exotic varieties, is taken into consideration, it is not surprising that they are taking the lead of the latter in general use.

The two favorite sorts are the *Catawba* and *Isabella*. Both are hardy, and are exceedingly productive. The Isabella has been generally introduced throughout the state of New-York, and is almost as familiarly known as the Spitzenburgh apple. It ripens, except in unfavorable seasons, but is too often eaten when half matured, and before its fine flavor is developed. The Catawba is hardly so early in ripening as the Isabella, but it succeeds finely in warm situations. In beauty of appearance, in excellency of flavor, and in productiveness, combined, it may be considered as taking the first rank among all hardy grapes, wherever the climate will admit its ripening. In growth, it closely resembles the Isabella, but may be easily distinguished by the rusty or brown tinge of the pubescence of its young leaves. N. LONGWORTH of Cincinnatti, states that he has had a bunch at one of his vineyards weighing 1¼ pounds.

The *York Madeira*, (totally distinct from the Alexander,) resembles the Isabella, but is free from the pulpy core of the Isabella, and ripens earlier, and hence would succeed further north. In size, it is a medium betweeen the Isabella and Elsinburgh; it is remarkable for the *shortness* of it joints. It appears to be but little known, and is not described in Downing's work on Fruits, the York Madeira being there placed as a synonym of the Alexander, an austere variety, not worth cultivating. It is not so rich, but is preferred by some to the Isabella.

The *Ohio* and *Lenoir* have been much cultivated near Cincinnati, and are estimated as fine for the table, possessing no pulp, and believed to be, at least in part, of foreign origin. At Boston and Albany, the Ohio is too tender and is of little value. The Herbemont strongly resembles the Lenoir, but differs, according to Longworth, in its less vigorous growth, darker colored wood, and the brownish cast of its terminal leaves, those of the Lenoir being green.

Horticultural Humbugs.

There are a number of these which take periodical journeys in the papers, and are thus "rescued," as the *Prairie Farmer* says, "from drowning." Among them are, that the insertion of apple grafts in a potato before planting in the earth, insures their growth; that covering asparagus stalks with a bottle, the stalk will soon swell prodigiously and fill the bottle; that the exclusion of grubs from cabbage may be effected by a circle of salt; that transplanting evergreens is successful at midsummer; that by grafting or budding the peach on the willow, the fruit, "*when*" it grows, will have no stones; that plucking potato balls will cause a great increase in the tubers; that peach and apple seeds, planted in the fruit, will infallibly re-produce the same variety; that the escape of sap, by pruning the grape in spring, will destroy the vine; that the growth of vegetables or weeds, will prevent the soil from drying by affording shade, &c.

Ripening Pears.

Those who have new varieties of pears ripening this year, must bear in mind that many of them will never exhibit their excellent qualities, unless picked just before maturity, and the ripening completed in the house. Not only must all those liable to core-rot be treated in this way, but many others. In some cases, certain varieties should be gathered two or three weeks before ripe, to prevent insipidity. We suspect the low estimate placed upon the Onondaga or Swan's Orange pear last Autumn at Boston, was in consequence of its not having been taken early enough from the tree, in a peculiar season, as specimens in the possession of the writer, picked three weeks before mellowing, were found fully equal in flavor, when tasted side by side, to the Dix and Louise Bonne of Jersey.

ERRATA.—Two typographical errors of a serious character, occured in the second column of the article in our last number on "*The Nursery Business.*" One, where the cost of ten acres of nursery for a year is put down as $1,000, instead of $2,000; and the other where the number of good saleable trees on 2¼ acres is erroneously printed *one thousand*, instead of *ten thousand*. These errors, uncorrected, almost destroy the value of the article.

"HINTS TO EMIGRANTS."

Hints to Emigrants, *or to those who may contemplate emigrating to the United States of America. By Rev.* D. R. Thomason, *Secretary of the Philadelphia Emigrant's Friend Society.*

The great tide of foreign population which is constantly flowing to our shores, has long rendered some safe and correct emigrants' guide, a desideratum. Mr. Thomason's manual we think, supplies the want indicated. It is written with much candor, and evidently with a strict aim to truth. The writer is an Englishman, who has resided in the United States eighteen years, and during that time has had opportunities for acquiring a good knowledge of the various sections. His remarks are addressed chiefly to the laboring classes of Great Britain and Ireland, who contemplate emigrating to America for the purpose of engaging in agriculture. His ideas in regard to the expediency of emigration, for people in various circumstances, appear to be well founded. It is the *small* farmers and farm-laborers, that he thinks would be most benefitted by a removal to this country. The *independent* tenant farmer, he advises to remain where he is; because "the inferior prices of farm produce in this country, and the higher rate of wages, together with the less abundant crops which are raised, less owing, probably to any inferiority of soil and climate, than to the mode of cultivation, render farming less profitable here than in England;" so that "the tenant of a large farm there, can afford to live better than the owner of the same number of acres here."

But to the two classes before mentioned, the inducements to settle in this country are great. In relation to the small farmer, it is said—"the proceeds of the sale of the stock and lease of your farm, will buy you a good farm in this country. Here you may live in independence and comfort. You have the advantage of education for your children, and may see them, instead of going down a step in society below yourself, moving upward; for it is the glory of our country, that the path of our children is upward, and that to their elevation there are no limits till they reach the summit and are in possession of the highest honors which their country can bestow."

The advantages offered to farm laborers are equally great. "They can find plenty of work here, and their children, if they are able to work, can get good places—for good boys and girls are much wanted. Servant girls may come over in any numbers, if they bring good characters with them, and they may find good places as soon as they arrive. * * * Boys above ten years of age may be placed with farmers or mechanics, until they are eighteen, and they will have board and clothing and schooling the while—girls may be placed in the same way."

He alludes to the extravagant expectations in relation to wages which foreigners, on first landing here, frequently entertain to their injury. His counsel is—"get employment as soon as you can, on any terms; be industrious, attentive, respectful; make it to the interest of your employer to keep you, and you will soon find out how much you are worth, and you will get it too."

More good advice is given in the following language: "Do not come out under the idea of settling in any of our seaports. You must keep out of the crowd, is the advice we have constantly to give to emigrants. To the want or neglect of this advice, the lamentable failures and misfortunes which befall foreigners in this country must mainly be ascribed. I know only two descriptions of emi grants who may safely calculate on finding employment in cities. These are, lads and female servants."

A word of useful caution is given to young servant girls. "I have said that men from the old country must try, as soon as they can to be like Americans; but I advise you to stay what you are; in dress, deportment, habits, the same modest, respectful, affectionate and faithful girls you were at home. You know not how much you will be prized. You have, probably, heard that in this country, female domestics are not called servants but *helps*, that they sit down at the same table with their masters and mistresses, and are altogether treated as members of the family. In the country generally, this is the case, though less so than formerly; but in our cities and larger towns, the English custom obtains; and I can assure you that the American practice is productive of much unpleasantness and annoyance, and is the principal cause why there is so little attachment between the mistress and servant. The latter may insist on equality with the former, and the claim may reluctantly be submitted to, because otherwise the '*help*' will not stay in the house; but she will be far less respected than the girl who knows her place and is willing to take it. Your duty and interest will be to leave this matter to those who employ you, and take with becoming modesty and cheerfulness whatever place is assigned you."

The section of country which the author deems most eligible for emigrants, is the southern part of the state of New-York, the states of New-Jersey, Pennsylvania, Maryland, Delaware and Virginia. Preference is also given to cleared lands, as better adapted to the general habits of foreigners than those which are heavily timbered. The latter conclusion is probably correct; and it may be true, as a general rule, that the section of country named, offers the greatest inducements to the class of settlers alluded to; but we think there are other parts where the emigrant may locate advantageously, without encountering the obstacles incident to pioneer farming, clearing the forest, &c. In Ohio, Indiana, Illinois, Michigan, Wisconsin, &c., near the navigable waters, or with means of communication by railroad or canal, there are always farms, more or less improved, and with good natural soil, which may be bought comparatively cheap,—the owners having the prevalent passion for selling out and removing "west." All agricultural products suitable for transportation readily sell for cash, where there is ready communication with the lakes, and the markets may be expected to improve.

The "old lands" of Virginia are favorably spoken of for emigrants, in the work before us; and the outlines of a system of cultivation, adapted to that section, are given. The chief peculiarity of the proposed system, consists in keeping the live-stock on the soiling plan. This, on account of the facilities it affords for making manure, we have little doubt would be preferable at first—especially as there would probably be a scarcity of suitable grasses for grazing—and perhaps might be found most profitable as a permanent system.

In conclusion, we will remark that the little work contains much information, valuable in an agricultural, civil and moral view; and we cordially recommend it to the attention of the class for whom it was designed.

NEW-YORK STATE FAIR AT BUFFALO.

The eighth Annual Show and Fair of the New-York State Agricultural Society took place at Buffalo, agreeably to appointment, on the 5th, 6th and 7th of September, and in the aggregate may be said to have fully equalled any former exhibition. The weather, always an important element in the success of displays of this kind, was all that could have been desired, not only during the show, but for several days preceding, which greatly favored the attendance of competitors and spectators. The collection of people was immense, estimated at least at fifty thousand. We are informed that the entire receipts were upwards of six thousand dollars, and this sum would seem to justify the above estimate, as to the number of persons admitted within the gates.

The attendance from abroad was very large. Every state in the Union was represented, and the population of those parts of Ohio, Michigan and Canada, which border on the lakes, turned out in *masses*. All mingled with our own citizens with perfect harmony, and the utmost cordiality and good feeling prevailed throughout. The general appearance and demeanor of the vast crowd was highly creditable. We did not see a disorderly person, nor hear of a vicious or mischievous act. All seemed actuated by a laudable motive of learning something useful, or else desired to gratify an innocent curiosity; and nearly every one appeared pleased and satisfied. In every view of the case, the exhibition has afforded abundant cause of gratulation,—it has been a credit to the *Empire State*; both in respect to the display of its products, and the indication it has afforded of the enterprise, taste and intelligence of its citizens. It is a matter of gratification, also, that these occasions are beginning to be regarded as the *annual jubilees* of the people; and we are confident that their influence in the establishment of our reputation and good standing, is very important.

The show-ground was on an elevated ridge, about two miles north of the city, and comprised an enclosure of sixteen acres, admirably suited in every respect, to the purpose. The arrangements were generally convenient. Three large buildings received most of the manufactured articles and dairy products, and a large tent was provided for the horticultural department. The smaller implements were shown in one of the buildings, and the larger ones were arranged in the open ground.

The animals had every accommodation which could be provided on such an occasion. The cattle were fastened in a beautiful grove, which extended nearly across the entire breadth of the show-ground, and afforded ample room for several hundred animals, which being abundantly supplied with forage and pure water, reposed quietly in the shade. This was a great advantage over a situation exposed to the scorching heat of the sun. The sheep and swine were in pens, shaded by boards laid across one side. The horses were disposed mostly in the central part of the field, and when exhibited to the judges were paraded in a circular enclosure where there was sufficient space for them to display their action.

We have only room to notice briefly the different departments of the show.

The Horses were very numerous, and comprised specimens of almost every breed and variety, from the diminutive Shetland pony to the enormous English draught horse. There were no less than seventy entries for stallions, divided into four classes, in each of which there was a fair proportion of good animals.

Of horses from out of the state, there were several from Canada, eminently deserving of notice. Prominent among these was the blood stallion *Mercer*, bred by the late king William Fourth, and now owned by John Gibson, of St. Catharines, C. W. He is a horse of beautiful proportions and figure. There was on the ground a draught horse called *Clyde*, of the Clydesdale breed, from Scotland, owned by Jane Ward, of Toronto, C. W. This horse was eighteen hands high, and of great bulk. He attracted much attention. Notwithstanding his enormous size, he moved with ease, and with a lighter and more sprightly gait than many horses of not much more than half his weight. The stallion *Alfred*, of the Cleveland breed, owned by H. Davis, of Toronto, and *Young Clyde*, owned by C. Harrison, of the same place, received much commendation. Five imported Shetland ponies, presented by James Dougall, Esq., of Amherstburgh, C. W., gave additional variety and interest to this department. There was also a beautiful Mexican pony, with Spanish saddle and trimmings, offered by H. Betts, of Meadville, Pa. Two mares of the Morgan stock, presented by C. H. Blodgett, of Chelsea, Vt., were much admired. There were several pair of matched horses from Illinois, Wisconsin, Michigan, and Ohio.

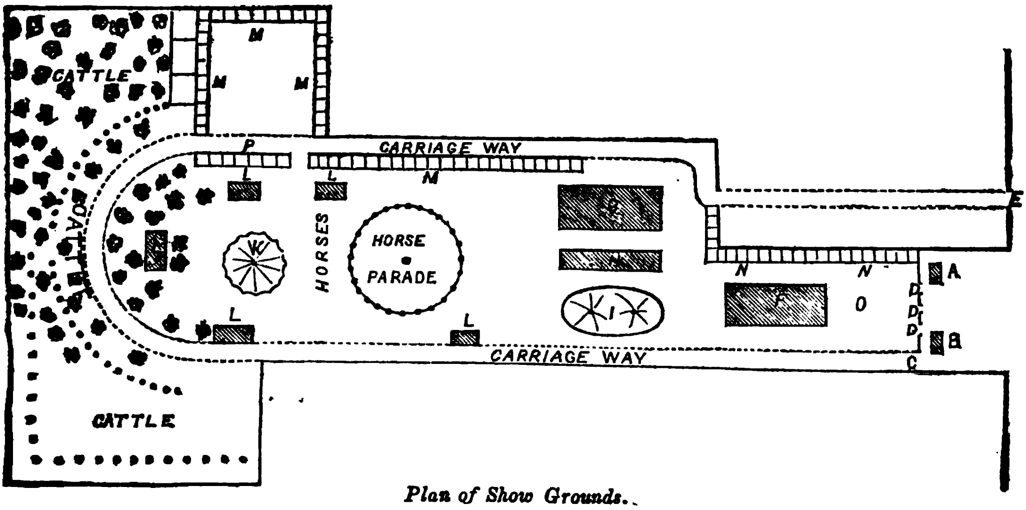
Of horses from within the state, we noticed among the class of "blood horses," *Bucyrus*, twenty-one years old, owned by S. W. Holmes, of Chautauque, Chautauque county,. (This horse was said to have been got by the *American Eclipse*, out of a mare bred by John Randolph, "of Roanoke," Va.) A very handsome and showy horse called *Young Alexander*, was presented by E. H. Ireland, of Watervleit. *Hornblower*, offered by Dr. E. C. Dibble, of Batavia, is an active horse, with strong marks of high blood.

Among the horses of "all work" we noticed two stallions, presented by John Henderson, of Mendon, Monroe county. One of these was bred in Vermont, and is a good specimen of the Morgans, except that his size is somewhat less than the average of that stock. He is a remarkably well-formed, vigorous, and active animal. The other horse is larger, but has less of the Morgan character. There was an imported stallion of the Cleveland-bay breed, called *North of England*, presented by Stephen Powell, of Lewiston; and several large and fine-looking colts, four years old, by this horse, offered by Mr. Powell and Mr. Robinson, of Lewiston.

In the class of "draught-horses," there were several deserving notice. The Norman horse *Louis Philippe*, owned by R. B. Howland, of Union Springs, Cayuga county, is an animal of great power. *Young Alfred*, offered by C. Scoby, of Springport, Cayuga county, appeared well. The four-year-old stallions belonging to Wm. Fleming, of Bethlehem, Albany county, P. Root, of Westfield, Chautauque county, and John Sybrant, of Lockport, Niagara county, all got by the imported draught-horse Sampson, were evidently strong and hardy animals.

The colts, from three years old downward, were numerous. Two two-year olds, by *Black Hawk* one owned by Gen. S. M. Burroughs, of Medina, and the other by Andrew Ellicot, of Shelby, Orleans county, attracted great attention. If they meet with no accident they will make horses that will be *heard from*.

Many breeding mares and foals were exhibited, but with a few exceptions they were of an inferior *caste*. Some good single horses were shown in harness. There



Plan of Show Grounds.

References.—*A.* Secretary's office.
B. Treasurer's office.
C. Carriage entrance.
D. D. D. Foot entrances.
E. Carriage egress.
F. Mechanics' Hall.
G. Manufacturers' Hall.
H. Dairy Hall.
I. Horticultural Tent.
K. Society's Tent.
L. L. L. L. Refreshments.
M. M. M. M. Sheep pens.
N. N. Poultry houses.
O. Implements and machines.
P. Pens for Swine.

were several pair of matched horses, but they were not in general as good as those offered at previous exhibitions of the Society.

The Cattle were more numerous than usual. There were specimens of Durhams, Herefords, Devons, Ayrshires, and grades. Several of different breeds were from Canada, and some from Ohio. J. B. Ewart, of Dundas, C. W., and Geo. Waters, of the same place, showed several fine cows, bulls, and heifers. of the Ayrshire breed. Messrs. Dougall, of Amherstburgh, Davis, of Toronto, and Maj. Rooth, of Dundas, showed some good Short-horns, of various ages. Samuel Cloon, of Cincinnati, Ohio, exhibited a very large and showy Short-horn bull, five years old, called *Sultan*, and two handsome calves. Frederick Brown, of Hudson, Summit county, Ohio, exhibited two large Short-horn cows, bred in Kentucky.

The Short-horns from our own state were numerous, but in general, we think the quality was not equal to most former exhibitions. The class, however, comprised several fine animals. The principal exhibitors were Col. Sherwood, of Auburn, L. F. Allen, Esq., of Black Rock, Robert Rome, of Mt. Morris, Livingston county, Z. B. Wakeman, of Herkimer.

The Herefords were not in great number, and the largest lot, Mr. Sotham's were in rather low flesh; but Mr. S., Hon. Allen Ayrault, of Geneseo, and S. W. Holmes, of Chautauque, had some fine stock. The two-year-old bull and heifer of Mr. H.'s, were not excelled by any of their age on the ground.

Of Devons, the display was larger than we have before seen, and they were generally very good—in several instances fine. This stock is evidently becoming popular. There were thirteen lots in this class, embracing seventy animals. E. P. Beck, of Sheldon, Wyoming county, H. N. Washbon, Butternuts, Otsego county, L. F. Allen, of Black Rock, J. W. Hamlin, of Aurora, Erie county, Dr. E. C. Dibble, of Batrvia, R. Radley and Mr. Vernon, of Stafford, Genesee county, showed excellent breeding stock. Mr. Hamlin's three-year-old bull, Mr. Beck's a year older, (of the same family,) and several of the cows and other stock offered by Mr. Washbon, Mr. Radley and Mr. Allen, were beautiful samples of the breed.

There were but few Ayrshires, except those before mentioned from Canada. Jas. S. Wadsworth, Esq., of Geneseo, and Mr. Rome, of Mt. Morris, Livingston county, each presented a good cow of this breed.

The show of fat cattle was probably the best ever seen in the State. There were twenty-eight animals, of different ages, and of every stage of fatness, from those which were only grass-fed, to those which were loaded with fat to the last degree. A pair of oxen, weighing near 3,000 pounds each, and of extraordinary fatness, were offered by J. & F. A. Alberger, of Buffalo. A pair of twin cattle, very large and fat, were shown by L. Brainard, of Attica. A short-horn cow, (*Pink*,) of great weight in proportion to the bone, was shown by Robert Hadfield, of Sheldon, Wyoming county. A grade short-horn cow, presented by Hon. A. Ayrault, of Geneseo, was very fat. A cross-bred Durham and Devon cow, offered by N. Kibbe, of Westfield, Chautauque county, was a fine animal. There were several pair of very superior fat steers and young oxen, from two to four years old, presented by Mr. Wadsworth, Mr. Ayrault and Mr. Freeman, of Geneseo, Mr. Sheldon and Mr. Munson, of Sennett, Cayuga county, and Mr. Humphrey, of Victor, Ontario county. A red two-year-old steer of Mr. Wadsworth's, deserves special mention. Considering him in regard to his form, size and *quality*, he was one of the most perfect animals of the ox tribe, we have ever seen.

The working oxen, though in considerable numbers, made, with few exceptions, but a poor display in appearance. There was but one team of ten yoke from any town, and that was composed of quite ordinary cattle.

The show of Swine was very limited, and not in general to be commended. R. B. Howland, of Union Springs, Cayuga county, showed a good Berkshire boar; and there were some good Leicester hogs offered by C. R. Nichols, of Darien, Genesee county.

The Sheep were perhaps equal in numbers to those of any former exhibition of the Society, but the Saxons and Merino's were in fewer hands than we should have desired—in other words, there should have been more competition. There were a few Merinos from Ohio, several lots from Vermont, and a few Leicesters from Canada. A handsome lot of fat Leicesters were offered by Samuel Peters, of London, C. W. The Merinos offered by Charles Button, of Franklin-Mills, Portage county, Ohio, were considered good. There were some very good sheep from the flocks of Mr. JEWETT, of Weybridge, Mr. WRIGHT, of Cornwall, and Mr. CAMPBELL, of Middlebury, Vt.

Of Merinos within the State, Col. SHERWOOD, of Auburn, exhibited about seventy head, among which were some excellent ones. J. D. PATTERSON, of Westfield, Chautauque county, showed twenty-one very good rams, of different families, and two ram-lambs of the stock of Mr. TAINTOR, of Hartford, Ct. A ram of good form and excellent fleece, fine in staple, and of remarkably even quality over the whole body, was offered by D. J. LEE, of Darien, Erie county. Gen. HARMON, of Wheatland Monroe county, E. C. SHERMAN, of Middlebury, Wyoming county, and C. C. PIERSON, of Avon, Livingston county, offered good sheep.

Some prime South-Downs were offered by Z. B. WAKEMAN, of Herkimer, and Col. SHERWOOD, of Auburn.

We noticed good long-wooled sheep—Leicesters and Cotswolds—offered by E. P. BECK, of Sheldon, Wyoming county, L. F. ALLEN, of Black Rock, THOS. TERRY, of Mt. Morris, Livingston county, JOHN WILKINSON, of Tonawanda, Erie county, and GEORGE SWALES, of Sodus, Wayne county.

The show of POULTRY was very large. They occupied sixty coops, arranged in a row. In fairness, however, we are compelled to say that many of the lots were of but indifferent quality. There were Bremen, African, Chinese, and wild geese; Muscovy, mongrel, and top-knot ducks; white and buff-colored turkeys; the different varieties of the Malay fowls, the Dorkings, Jersey blues, black, white, silver, and golden top-knots, and bantams; Guinea fowls, prairie hens, and fancy pigeons, with a sprinkling of parrots and Canary birds.

There was one thing in the classification of fowls that we think objectionable, viz: the application of different names to the same breed. Thus we noticed the names of China, Cochin-China, Ostrich, Bucks county, Java, and Malay, applied to lots which were evidently but trifling variations of the general tribe of Malays. The unnecessary multiplication of names only serves to create confusion, and lead people to purchase what they already possess, or do not want. The prairie hens (pinneted grouse) were a novelty, and attracted more notice than anything else in this department. There were 50 of them, apparently well domesticated and contented. They were offered by GEORGE F. MORRIS, of Buffalo.

The principal competitors were H. A. PARSONS, Buffalo, L. F. ALLEN, Black Rock, N. S. SMITH, G. CLARKE, and J. E. MARSHALL, Buffalo, and D. REDMOND, of Utica. The Dorkings of Mr. ALLEN, were very superior. Mr. REDMOND offered a lot of Jersey blues—a large and handsome formed fowl, apparently a cross of the game and Malay or Java breeds.

Four pair of fancy lop-eared rabbits were offered by Mr. REDMOND. They are of the stock imported by F. ROTCH, Esq., of Butternuts, N. Y. One pair, six months old, weighed seventeen and a half pounds. Mr. PARSONS also presented several pair of very handsome rabbits—white, with black ears, and a narrow ring of white round the eyes, and occasionally a small line of black along the centre of the back.

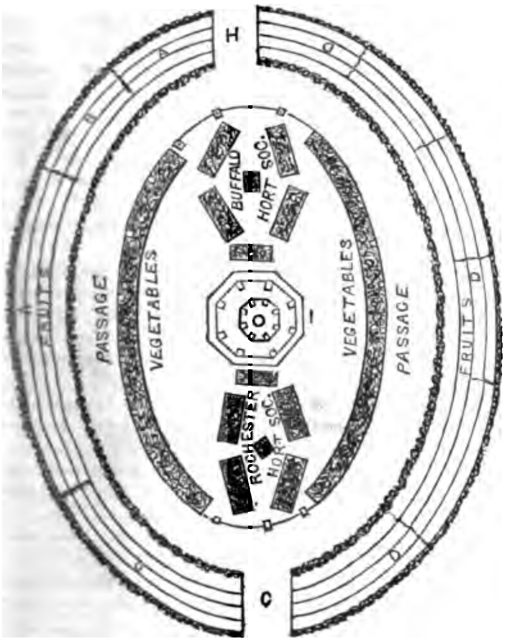
The DAIRY PRODUCTS, were in considerable quantities. There were thirty-two entries for cheese, and twenty-four for butter. We were told by those who examined the cheese, that it was generally of good quality; the butter did not receive general commendation, though there were some lots of superior quality. We noticed a lot of twenty cheeses, taken from a lot of 8,000 pounds, manufactured for the Spanish market by GEORGE HEZLEP, of Gustavus, Trumbull county, Ohio. It was similar in appearance to the cheese made in the vicinity of Winchester, Connecticut, by Mr. COE and others. A lot of Stilton cheese was offered by HENRY PARSONS, of Guelph, Canada West. Mr. P.'s cheese of this kind is well known in the Canadian cities, and is much sought after. We noticed lots of good cheese from D. NEWTON, and E. and H. COLVIN, of Hamburgh, Erie county, and WM. OTTLEY, of Oaks' Corners, Ontario county. Fine butter was offered by JOHN HOLBERT, of Chemung, Chemung county. (Mr. H. has on several occasions received the Society's premiums.) Good samples were also offered by N. VAN NESS, of Mayville, Chautauque county, and A. WOODRUFF, of Sheldon, Wyoming county.

The IMPLEMENTS were more numerous than at any former exhibition of the Society, and they made a very handsome display. There were several new articles which seem likely to become useful., The chief exhibitors were H. L. EMERY, of Albany, STARBUCK & SON, of Troy, RAPALJE & BRIGGS, of Rochester, E. R. BURRALL, of Geneva, and EDDY & Co., Union Village, Washington county. We have not room, at present to notice the various articles in this department, but in our next shall furnish a more particular account.

The arrangement for the exhibition of HORTICULTURAL PRODUCTS, were commodious and excellent. A large elliptical tent, 80 feet wide, and 120 feet long, was devoted to this purpose. Around its whole interior circumference, extended a line of four terraced shelves or tables, covered with white muslin, and edged at each terrace with evergreens. The whole distance round, these were loaded with handsomely arranged specimens of fruit, from several different states of the Union. A railing, 4 ft. off, covered with white muslin, and with a dense evergreen lining, protected these fruits from the passing crowd. Within this railing, was a broad passage for spectators. Still, within the passage, were semi-elliptical tables heavily loaded with vegetables of large, and some of really mammoth growth, from a great number of contributors. These tables, occupied an aggregate length of more than 100 ft. very densely covered. In the centre of the tent was an exceedingly rich and chaste evergreen temple, octagonal in form, on a green massive base. It was 17 feet in diameter, and 22 feet high, and its interior was decorated wtth a fine statue of Flora. For the arrangement and execution of the ornamental part of the interior of the great tent, the public are indebted largely to the excellent taste, energy and perseverance of the ladies of Buffalo.

Between this temple and the entrance passages on either side, were tables covered with a brilliant display of flowers, arranged in great variety. We noticed a beautiful moss basket, densely filled with a rich admixture of fruits; a splendid parterre of dahlias; and a massive vase on a green pedestal, containing a pyramid of flowers nearly 6 ft. high, the whole being 9 feet in height, all from B. HODGE of Buffalo. A. BRYANT & SONS, of the same place, occupied a part of the tables with large collections of flowers, including a pyramid 6 ft. high. An extensive collection of cut flowers, in vials and hand vases, was exhibited by ELLWANGER, BARRY & ROWE, of Rochester; their display of Dahlias was particularly fine, and contained many brilliant, rich and rare varieties. Four square moss baskets, filled with parterres of roses, dahlias and verbenas, and a large number of greenhouse plants were furnished by WM. WEBB, of Buffalo. An artificial evergreen support for flowers, somewhat in the form of a tree, the arms terminating with brilliant bouquets of flowers, was also presented by Mr. WEBB. A number of smaller collections were noticed, and one especially from E. T. T. MARTIN, of Owasco, containing some fine and rare sorts.

Among the contributors of fruits, were ELLIOT & Co., Cleveland, Ohio; ELLWANGER, BARRY & ROWE, Rochester; A. BRYANT & SONS, and B. HODGE, Buffa-



Interior of Great Tent.

A. A. Fruits from Cleveland. *E.* Vase with pyramid of flowers.
B. do Montreal. *F.* Support for flowers.
C. do Detroit.&C.W. *G. H.* Ingress and Egress.
D. D. D. do This State. *I.* Temple of flora.

lo; **Jas. Dougall**, Amherstburgh, C. W., **J. C. Holmes**, and **Hibbard & Davis**, Detroit, all of whom exhibited large miscellaneous collections. **George Andrews** of Montreal, presented a very extensive collection of apples, mostly of European origin, with some of the celebrated Canadian varieties, beautifully arranged and divided on the different terraced tables into early, middle and late. We noticed also, a large collection of apples, and a few fine peaches, from **L. Fay**, of Portland, Chautauque Co., N. Y.; some very choice peaches, plums and pears, from **H. G. Dickerson** of Lyons; Hawley and other apples, from **E. C. Frost** of Chemung Co., N. Y.; a branch of Oswego Beurre, two ft. long, loaded with near a half peck of fruit, with several other fine sorts, from **J. W. P. Allen**, of Oswego; splendid baskets of Crawford's Early peach, from **Jas. M. Whitney**, of Rochester, an admirable fruit for public exhibitions, for although not of the highest quality, its great size, and rich and showy appearance excite universal admiration in those who have only the privilege of feasting their eyes. Among the spectators, no fruit attracted more attention than the showy and monstrous Alexander apple, found in several collections and humorously called "*Alexander the Great*," but possessing little real merit, though producing a total eclipse of smaller and better varieties. One of the best and largest collection of peaches, was from **Bissell, Hooker & Sloane**, of Rochester. But the largest collection by far, which appeared upon the tables, though perhaps not the most numerous in varieties, was that presented by the Cleveland Horticultural Society, furnished by 17 different contributors, and occupying 70 feet of the circumference of the great Tent.

Manufacturers' Hall was distinguished by the rich profusion of the useful and ornamental, in almost endless variety, which has marked our best exhibitions of the kind. There were many fine specimens of cabinet ware and upholstery, of the most finished and costly character, reaching to the full summit allowed by republican simplicity; bed quilts of all sorts and degrees of splendor; stuffed quilts and worked quilts in fine display, the bare contemplation of all which was sufficient to inspire in its full force the idea of comfort which the Spanish express by "sleeping full gallop." So numerous were these articles, with the various exhibitions of carpets, broadcloths, hearth-rugs, skilfully wrought ornamental needle work in rich figures and landscapes, and embroidery, and domestic skill of all imaginable sorts, exhibited in strong characters, that we relinquished all attempts to name or discriminate, but were obliged to estimate them by the half acre.

During the exhibition, several speeches and lectures were delivered. Besides the annual address, by Hon. **John C. Spencer**, Prof. **J. P. Norton**, and Dr. **Lee** gave lectures. Prof. N.'s lecture was given in the Court-house, to a large and attentive audience, on Wednesday evening. The general subject was the origin and composition of soils. Dr. L.'s was given in the large tent on the show-ground—the subject, the necessity of understanding the principles of agriculture.

In behalf of the Society, we would express our thanks to gentlemen in Canada and our sister states, who by sending their animals and articles, greatly contributed to the interest of the exhibition. The thanks of all are also specially due to those gentlemen from abroad who ably assisted as judges in awarding the premiums. We hope it may some day be in the power of our citizens to reciprocate the favor.

Sales at the State Fair.

The amonnt of property in live-stock, implements, &c., which changed hands at the late Show and Fair of the New York State Agricultural Society, was quite large. We are now fully convinced of the correctness of the idea which we have frequently advanced, that the connection of the business of buying and selling, with these exhibitions, would be the most effectual means of sustaining them. An important matter, however, must be borne in mind: the exhibitions must be held at accessible points—places to which people, animals, and articles can be readily taken, comfortably accommodated, and readily taken away. On this point we shall have something more to say hereafter.

We have received no authentic accounts of the sales made at Buffalo, but will mention a few which happened to come to our knowledge.

Col. **Sherwood**, of Auburn, sold at auction twenty head of Short-horn cattle, (mostly young,) at prices from $40 to $130 per head. We understand they went mostly to the west. Mr. **Bell**, of Morrisiana, Westchester county, sold his Short-horn bull *Marius* to Judge **Harold**, of Clarke county, Ohio. This fine animal will prove of great value to the stock-growing region to which he has gone. Col. **Campbell**, of Schenectady, sold two Short-horn heifers to Mr. **Wolf**, of Coshocton, Ohio. Mr. **Cloon**, of Cincinnati, sold his Short-horn bull calf, but we did not learn the purchaser's name. We understand that **L. F. Allen**, Esq., sold some of his Short-horns, to go to Cuba. There were probably other sales of this kind of stock, of which we did not hear.

Mr. **Sotham** sold several Herefords to go to Cuba, and some for other destinations. Devons sold readily, about fifty head of full bloods being disposed of. The two Devon bulls which took the two first premiums, (both bred by Mr. **Beck**, of Sheldon, Wyoming Co.,) were sold; the former to a gentleman in Michigan, the other to Mr. **Buckingham**, near Zanesville, Ohio. **S. G. Collins**, of Washington, Dutchess county, purchased eight head of Devons of Mr. **L. F. Allen**, of Black Rock. Mr. **Washbon**, of Butternutts, Otsego county, also sold several fine animals.

Several Ayrshire bulls and heifers were also sold, but we did not learn particulars.

In Merino sheep there were sales to a considerable extent. Col. Sherwood sold about seventy rams. Mr. Patterson, of Chautauque county, Mr. Jewett, and Mr. Campbell of Vermont, and others, made sales.

We are not apprised of many sales in horses; we understand that Mr. Blodgett's Morgan mare, which took the first premium in the class out of the state, was purchased by Mr. Geo. A. Mason, of Jordan. He is one of the owners of the Morgan horse *General Gifford*, and with this fine mare, and others, will soon show first rate stock. Mr. Blodgett's other mare, we are informed, was sold to a gentleman in Auburn.

In implements, the sales were large. H. L. Emery, of Albany, sold on the ground, and made contracts to the amount of $3,000. Large sales of plows and other implements were made by Ruggles, Nourse & Mason, Worcester, Mass., Starbuck & Son, Troy, E. J. Burrell, of Geneva, and Rapalje & Briggs, of Rochester.

Considerable contracts were also made for butter and cheese, seed grain, stoves, fabrics, upholstery, cabinet ware, &c.

Premiums Awarded

At New York State Agricultural Fair, Sept. 1848.

CATTLE—Short Horns.

Over 3 *years old*—Bulls—1. Z. B. Wakeman, Herkimer, $25—2. Robert Rone, Mount Morris, $15—3. Benj. Hewitt, Lewiston, $5. Cows—1. J. M. Sherwood, Auburn, $25—2. M. Whiteside, Mayville, $15—3. W. R. Foster, Batavia, $5.

Two years olds.—Bulls—1. Robert Rone, $20—2. J. M. Sherwood, $10—3. W. R. Porter, $5. Heifers—1. Lewis F. Allen, Black Rock, $20—2. J. M. Sherwood, $10—3 to the same, $5.

Yearlings.—Bulls—1. Z. B. Wakeman, $15—2. J M. Sherwood, $10. Heifers—1. H. Schermerhorn, Schenectady, $15—2. W. R. Porter, $10—3, J. M. Sherwood, $5.

Calves.—Bulls—1. J. M. Sherwood, $10—2. L. F. Allen, $3, and Wash. Letters.

Heifers—1. Z. B. Wakeman, $10—2 L. F. Allen, $3 and Wash. Let.

HEREFORDS.—*Over* 3 *years old.*—Bulls—1. W. H. Sotham, Black Rock, $25. Cows—1. W. H. Sotham, $25—2d and 3d. Allen Ayrault, Geneseo, $15 and $5.

Two years old.—Bulls—1 S. W. Holmes, Chautauque, $20—2. P. Whitney, Niagara Falls, $10. Heifers—1. S. W. Holmes, $ 20—2d and 3d. W. H. Sotham. $10 and $5.

Yearlings.—Bulls—1st and 3rd. W. H. Sotham, $15 and $5—2. Allen Ayrault, $10. Heifers—1st and 2d. W. H. Sotham, $15 and $10—3. John T. Bush, Tonawanda, $5.

Calves.—Bulls—1. W. H. Sotham, $10—2. Allen Ayrault, $3, and Wash. Let. Heifers—W. H. Sotham, $10—2. Allen Ayrault, $3, and Wash. Let.

DEVONS.—*Over* 3 *years old.*—Bulls—1. J. W. Hamlin, Aurora, Erie county, $25—2. E. P. Beck, Sheldon, $15—3. E. C. Dibble, Batavia, $5.

Two years old.—Bulls—1. L. F. Allen, $20.

Yearlings.—Bulls—1. A. Woodruff, Sheldon, $15—2 M. Vernon, Stafford, $10—3. L. Hicox, Alexander, $5.

Calves—Bulls—1. H. N. Washbon, Butternuts, $10—2 E. P. Beck, $3, and Wash. Let.

Cows.—*Over three years old.*—1 and 3 H. N. Washbon, $25—and $5—2. E. C. Dibble, $15

Heifers—*Two years old.*—1, 2, & 3. E. P. Beck, $20, $10, and $5.

One year old.—1 and 3. E. P. Beck, $15 and $5—2. H. N. Washbon, $10.

Heifer Calves—1. H. N. Washbon, $10—2. J. W. Hamlin, $3 and Wash. Let

AYRSHIRES.—*Over* 3 *years old.*—Cows—1. Robert Rone, $25.—2. J. S. Wadsworth, $15.

Heifers—*Yearlings.*—1. Robert Rone, $15.

NATIVES AND CROSSES BETWEEN IMPROVED AND NATIVES.—Cows—*Over* 3 *years old.*—1. Allen Ayrault, Geneseo, $20—2. Alfred Gale, Black Rock, $12—3. Aaron Taylor, Alden, $4.

Heifers—*Two years old.*—1. E. C. Dibble, $15—2. Alfred Gale, $10—3. E. P. Beck, $3.

Yearlings.—1. Allen Ayrault, $10—2 and 3. M. C. Remington, Sennet, $8 and $3.

Heifer Calves.—1. M. C. Remington, $3—2 Alfred Gale, Wash. Let.

WORKING OXEN.—*Ten yoke from one town.*—G. Paxton and others, Eden, Erie county, $15.

Best Yoke of Oxen—*Over four years old*—1. B. Murphy. Leroy, $25—2. Henry Dixon, East Bethany, $15—3. Allen Ayrault, $6.

Steers—*Three years old.*—1. Allen Ayrault, $10—2. J. Freeman, Geneseo, $8—3. R. Humphrey, Victor, $5 and vol. Trans.

Steers—*Two years old.*—1. J. S. Wadsworth, $8—2. Allen Ayrault, $5—3. A. Brown, New Bethany, $3 and vol. Trans.

Steers—*One year old.*—1. B. Benedict, Alexander, $8—2. Elon Sheldon, Sennet, $5—3. L. Hicox, $3 and vol. Trans.

Steers—*Trained by boys under sixteen years of age.*—1. J. P. Benedict, Alexander, Silver Medal—2. Cleveland Allen, Black, $3 and Trans.—3. Abijah McCall, Aurora, Erie county, Trans.—4. L. H. Yates, Darien, (discretionary,) $2.

FAT CATTLE.—*Pair fat oxen over* 4 *years old.*—1. J. & F. A. Alberger, Buffalo, $30—2. Lyman Brainard, Attica, $20—3. L. Doty, Attica, $12.

Single Ox—*Over four years old.*—1. Edward Munson, Sennet, $15.

Fat Cow—*Over four years old*—1. Robert Hadfield, Sheldon, $15—2. Robert Fowler, Batavia, $10—3. Allen Ayrault, $6.

Pair Fat Steers—*Under four years old.*—1. Elon Sheldon, $15—2 B. Humphrey, Victor, $12—3. John Burns, Penfield, $8.

Single Steer—*Under four years old.*—1. Edward Munson, $10—2 Henry Dixon, $6.

Heifer—*Under* 4 *years old.*—1. Joshua Barnes, Buffalo, $10.

Grass-fed Cow—*Over* 4 *years old.*—1. Norman Kibbe, Westfield $15—2. Robert Hadfield, $10

FAT SHEEP.—Long-Wooled.—1 and 2. Wm. Terry, Mt. Morris, $10 and $7—3. George Swales, Sodus, $5.

Middle-wooled.—1. Robert Fowler, $10—2. F. W. Collins, Bloomfield, $7—3. L. F. Allen, $5.

MILCH COWS—James Brookins, Aurora, Erie county, $20.

HORSES.—For all work.—Stallions—1. Jas. M. Davis, Arcadia, for *Sir Archy Duroc*, $25.—2. N. Bailey, Henrietta, for *Magnum Bonum*, $15—3 John Henderson, Mendon, for *Morgan Eagle*, $8—4. Geo. Robinson, Lewiston, for *North Star*, 1 vol. Youatt's Treatise on the Horse.

Brood Mares—Jas. Brookins, 4th premium, Youatt.

Draught Horses.—Stallions.—1. C. Schohey, Springport, for *Young Alfred*, $25—2. Philander Root, Westfield, for *Young Sampson*, $15—3. John Sybrant, Lockport, for *Sampson*, $8—4 R. B. Howland, Union Springs, for *Louis Philippe*, 1 vol. Youatt. In this class the committee *commend* the following horses, without giving the names of the owners: *Young Eclipse*, *Cornplanter*, *Grand Turk*, *Don Juan*, *Bucephalus-Victor*, *Western Lion*, *Prince Duroc*, *North-of-England*.

Brood Mares.—1. T. C. Love, Buffalo, $25—2. Alex. Hitchcock, Checktowaga, $15.

Blood Horses.—Stallions.—1. E. H. Ireland, Watervliet, for *Young Alexander*, $25—2 Wilson Little, Lodi, for *Culpepper*, $15—3. E. C. Dibble, for *Hornblower*, $8—4. S. W. Holmes, for *Bucyrus*, vol. Youatt.

COLTS—*Three years old.*—1. John D. Spinner, for *Sir Henry Eclipse*, $15—2. H. Whalen, Penfield, for *Alfred Matchless*, $10—3. Truman Hungerford, Watertown, vol. Youatt—4. Jesse Brown, Darien, vol. Trans.

Colts.—*Two years old.*—1 S. W. Holmes, Chautauque, $10—2. S. M. Burroughs, Medina, $5—3. M. L. Hungerford, Watertown, vol. Trans.

Colts.—*One year old.*—1. T. M. Pendergrass, Ripley, $5—2. C. R. Nichols, Darien, vol. Youatt—3. Samuel Cassidy, Royalton, vol. Trans

Filley.—*One year old.*—J. D. Van Allen, Black Rock, $5.

Discretionary premiums.—H. H. Norman, Perrinton, for gelding colt, diploma—John West, Brandt, for pair geldings, vol. Youatt—L. L. Van Vliet, Aurora, Erie county, Trans.—B. W. Pratt, Collins, for gelding, Transactions.

Matched Horses.—1 W. Morgan, Victor, $20 and diploma—2 E. Stage, Wolcott, $15—3. Charles Axtell, Sodus, $10

Geldings.—1 and 3. Stephenson and Brothers, Buffalo, $10 and diploma, and $6—2. J. S. Wadsworth, $8.

SHEEP.—Long-wooled—Bucks, *over two years old.*—1. Wm. Terry, Mt. Morris, $15—2 J. Terry, Mt. Morris, $10—3. George Swales, Sodus, $5.

Bucks, *under two years old.*—1. John Wilkinson, Tonawanda, $15—2. L. F. Allen, $10—3. J. Bicknell, Aurora. $5.

Ewes.—*Pen of five over two years old.*—1. Henry Lyons, Lewiston, $15—2. Wm. Robinson, Westmoreland, $10.

Ewes.—*Pen of five under two years old.*—1 and 2, Thomas Terry, Mt Morris, $15 and $10—3. J. Bicknell, $5

Buck Lambs.—*Pen of five.*—1. J. Bicknell, $10—2. Thomas Terry, $5.

Ewe Lambs.—*Pen of five.*—1. E. P. Beck, $10—2. Thomas Terry, $6.

Middle-wooled Sheep.—Bucks, *over two years old.*—1 and 3. Z. B Wakeman, $15 and $5—2. James Parsons, Riga, $10.

Bucks, *under two years old*—1, 2 and 3. Z. B. Wakeman, $15, $10, and $5.

Ewes, *over two years old.*—1 and 3. Z. B. Wakeman, $15 and $5—2. James Parsons, $10.

Ewes, *under two years old*—1. Z. B. Wakeman, $15—2. James Parsons $10—3, Wm. Hotchkiss, Lewiston, $5.

Buck Lambs.—*Pen of five.*—1. Z. B Wakeman, $10—2 James Parsons, $5.

Ewe Lambs.—*Pen of five.*—1. Z. B. Wakeman, $10—2. L. F. Allen, $5.

Merinos and their Grades.—Bucks—*Over two years old.*—1. D G. Lee, Darien, $15—2 E. C. Sherman, Middlebury, Wyoming county, $10—3. J. M. Sherwood, $5.

Bucks—*Under two years old.*—1. J. M. Sherwood, $15—2. E. C. Sherman, Middlebury, $10—3. J. W. Hyde, Darien. $5.

Ewes—*Pen of five.—Over two years old.*—1. E. C. Sherman, $15—2. R. Harmon. Wheatland, $10—3. Amos Chilcott, Hamburgh, $5.

Ewes—*Pen of five under two years old.*—1. R. Harmon, $15—2. Amos Chilcott, $10—3. C. C. Pierson, Avon, $5.

Buck Lambs—*Pen of five.*—1. Dexter Ewell, Alden, $10—2. R Harmon, $5.

Ewe Lambs—*Pen of five.*—1. Amos Chilcott, $10—2. R. Harmon, $5.

Saxons and their Grades—Bucks *over two years old.*—1. Chas.

Colt, Geneseo, $15—2. S. B. Crocker, Vernon, $10—3. Erastus Hurd, Royalton, $5.

Buck Lambs—Chas. Colt, $5.

Ewes—*Over two years old.*—1. Chas. Colt, $15—2 and 3. S. B. Crocker, $10 and $5.

Ewes—*Under two years old.*—1. S. B. Crocker, $15—2. Erastus Hurd, $10.

SHEPHERD'S DOG.—J. M. Sherwood, $5.

SWINE —Boars—*Over two years old.*—R. B. Howland, (Berkshire,) $10—2. Augustus Raynor, Clarence, $5.

Boars—*Over one year and under two years old.*—1. C. R. Nichols, $10.

Boars—*Over six months and under one year old.*—1. N. W. Briggs, Lewiston, $8—2. C. R. Nichols, $5.

Breeding Sows—*Over two years old.*—1. J. Winspear, Lancaster. $10—2. Samuel Loper, Clarence, $5.

Breeding Sows—*Over one year and under two years old.*—1. J. B. Stannard, Alexander, $10.

Pigs—*Under ten months old.*—O. Lathrop, Darien, $10.

POULTRY.—Dorkings, L. F. Allen, $3. Polands, H. A. Parsons, Buffalo, $3. Large Fowls, J. R. Lee, Buffalo, $3. Turkeys, Grosvenor Clark, Buffalo, $3. Muscovy Ducks and Small Ducks, N. S. Smith, Buffalo, $6. Guinea Hens, E. Bennett, Cherkicwaga, $3. China Geese, L. F. Allen, $3. African Geese, D. Redmond. Utica, $3. Wild Geese, H. A Parsons, $3. Best lot of Poultry, H. A. Parsons, $10. Pigeons, G. Becker Buffalo, $3. Prairie Hens, Geo. F. Morris, Buffalo, $2. Birds from Van Dieman's Land, Geo. Cuthbertson, vol. Trans. and diploma.

RABBITS.—D. Redmond, diploma.

PLOWS.—*Best for general purposes.*—1. John Vanbrooklin, Middleport, $10 and diploma—2. Homer Scott, Cambria—3. N. Starbuck and Son, Troy—4 H. Delano, (discretiony,) diploma.

PLOWING MATCH —1. David Cossett, Onondaga, $15—2. E Davis, Watertown, $12—3. Walden Eddy, Union Village, $10—4. N. Sanderlin, Colman's Tour—5. Homer Scott, Trans.

FARM IMPLEMENTS.—No. 1.—Farm Wagon.—R. Dickinson, Fredonia, $10 and diploma—2. Levi Newton, Attica, Col. Tour

Harrow.—H. L. Emery, Albany, $3 and dip.

Corn Cultivator.—1. E. J. Burrall, Geneva, $3 and dip.—2. Wm. Adams, Middleport, Trans.

Cultivator for general use.—E. R. Dix, Vernon.

Fanning Mill.—1. Rapalje & Briggs, Rochester, $5 and dip.—2. H L. Emery, Trans.

Horse Power.—1. Joseph Hall, Rochester, $5 and dip —2. H. L Emery, Trans.

Corn stalk Cutter.—1 G. Catchpole, Geneva, $5 and dip.—2. C. Burnett, Lyons, Trans.

Straw Cutter.—Rapalje & Briggs, $3 and dip.

Threshing Machine —1. Joseph Hall, $10 and dip.—2. H, L. Emery, Trans.

Corn and Cob Grinder and Crusher.—J. G. Case, Utica, $5 and dip.—2. H L. Emery, Col. Tour

Mowing Machine —Wm F. Ketchum, certificate. (This article received a diploma at the Society's exhibition, 1847.)

Reaping Machine.———Hussey, certificate.

Grain Drill.—1. A. Palmer, Brockport, diploma—2. Rapalje & Briggs, (Pennock's patent,) certificate.

Corn Sheller and Cleaner —1. A. H. Stevens, Geneva, dip —2. E J. Burrall, dip.

Wheat Cultivator.—1. (Ide's,) L. A. Morse, Medina—2. (Hinkston's) D. Hinkston, Clarksou.

Cultivator and Drill Combined.—J. W Sherman & Co., Ontario.

Broad-cast Sower —J. W. Sherman & Co.

Double-guage Clevis.—1 J. Van Brooklin—2 Garret Erkson, Hobart.

Eave-Trough —Ira Ewing, Hume, certificate.

Buggy with Top.—1. P. M. Crandall, Canandaigua—2. Mr. Williams, Buffalo.

Farm Buggy.—Levi Newton

Grist Mill.—E. T. Butler, Norfolk, Conn.

Refrigerator —Rapalje and Briggs.

Centrifugal Wind-mill.—(Judd's.) commended.

Portable Grist-mill.—(Fitzgerald's) Charles Ross, New-York, commended.

Improvement in Bed-Stead Fastenings.—J. D. Sanford, Bennington.

FARM IMPLEMENTS, No. 2—Horse Rake.—J. Swift, Clarkson. $3 and dip.

Ox Yoke —Rapalje & Briggs.

Single Harness.—1. J. M. Deveaux, Syracuse, Silver medal—2. W. C. Lockwood, Buffalo, diploma.

Bridle and Martingale —A. Culver. New-Fane, dip.

Dozen Axes.—Pratt & Co., Buffalo, $2 and dip.

Seven Axes.—L. & J. J. White, dip.

Churn.—Peter Fraer, Lewiston, $2 and dip.

Cheese press —W. G. Brainerd, Rome, $2 and dip.

Anti-friction Press.—(Dix's) J. B. Holmes, Meadviville, Pa., diploma.

Grain Cradle.—H. L. Emery, $2 and dip.—2. L. D. Hathaway, North Boston, dip.

Hay Forks.—(Partridge's) H. L. Emery.

Half-Dozen Manure Forks —H. L. Emery.

Half Dozen Grass Scythes.—Pratt & Co., Buffalo.

Agricultural Implements.—*Best and most numerous collection*—H. L. Emery, $20 and dip. Same, *made within the State*, Rapalje & Briggs, $20 and dip.

BUTTER.—*Best from five cows in thirty days.*—1. E. R. Evans, Marcy, $25—2. John Holbert, Chemung, $15—3. A. Woodruff, Sheldon, $10. *Best made in June*—1. Wm. Robinson, Westmoreland, $10—2. N. Van Ness, Marcy, Col. Tour.—3. John Holbert *Best made at any time.*—1. John Holbert,—2. A. Woodruff,—3. N. Van Ness—4. John Sill, Alden.—5, F. Williams, ———. *Best made by girls under twenty-one years of age.*—1. Lydia A. Van Ness, Mayville, silver cup, of the value of $10—2 Maria Van Ness, Mayville, pair butter knives, $8—3 Martha Holbert, Chemung, tea spoons, $5.

CHEESE.—*Over one year old* —1. D. Newton, Hamburgh, $20 —2. E. & H. Colvin, Hamburgh, $10—3. Wm. Otley, Oaks' Corners, $5—4. Clark Avery, Perryville, Col. Tour.

Cheese.—*Under one year old.*—Silas Wheelock, Hamburgh, $15 2. E. & H. Colvin, $10—3. Talcott Francis, Colden, $5—4. Daniel Newell, Wales, Col. Tour.—4. Arnold and Littlefield, Clymer, Trans.

Cheese.—*Largest amount from one county.*—Geo. A. Moore, Buffalo, for Erie county.

Stilton Cheese.—H. Parsons, Guelph, Canada West, Silver medal and diploma.

Diplomas for cheese were awarded to Geo. Hezlep, Trumbull county. Ohio, and to A. Krum and W. O. Green, Ashtabula county, Ohio.

Sugar.—1. Benj Gaus, East Bloomfield, $10—2. Frederick Williams, Gerry, $5—3 Edward Cheeney, Pavillion, Col. Tour.—4. Bennett Radford, Hanover, Trans.

Honey.—1. J. Hoag, Black Rock, $5—2. Michael McDonald, Aurora, Erie county, $3—3 E. & H. Colvin, Trans.—L. F. Allen, (discretionary) diploma.

SILK & SILK GOODS.—Reeled Silk —Mrs P. Staats, Buffalo, $5 and dip.

Sewing Silk.—1. Clark Avery, $10 and dip.—Mrs. P. Staats, $5.

Cocoons —Mrs. P. Staats, $8.

Silk Stockings.—1. Mrs. E. Bishop, Attica—2 Mrs. P. Staats—3. A H. Sowle, Hamburgh.

Diplomas were awarded for raw silk, to A. H. Sowle—for silk shawl, to Mrs. Staats—and for silk umbrellas and parasols to J. Niele, Buffalo.

DOMESTIC MANUFACTURES.—No. 1. Woolen Blankets. —1. Mrs. G W. Patterson, Westfield, $6—2. Mrs. J. D. Van Allen. Black Rock, $4—3. Mrs. Worden Mattison, Darien, $2

Flannel.—1. Mrs. Ruth Sherman, Eden, $6—2. Mrs. Sarah J. Darrow, Darien, $4—3. Erastus Hurd, Royalton, $2.

Woolen Cloth —1. Mrs. Ira McCall, Aurora, Erie county, $10 —2. Mrs. Clark Avery, $8—3 Eri Eggleston, Lancaster, $5.

Woolen Carpet.—1. J. J. Davidson, Warsaw, $10—2. Alonzo Harvey, Wales, $8.—3. Mrs. A. Haddington, Aurora, Erie county, $5.

Hearth Rug.—1. Mrs Jesse Ketcham, Black Rock, $5—2. Mrs. J. Horsford, Moscow, $4.—3. Mrs. Caroline Alexander, Buffalo, $3—4 Miss. Mary J. Green, Sheridan, $2—5. Mrs. Wm. V. Wilson, Ridgway, Trans.

Rag Carpet.—1. J. Hoag, Hamburgh, $5—2. Mrs Roscoe, Buffalo. $4—3. Horace Parker, Hamburgh, Trans.

Double Carpet Coverlet.—1. Mrs. C. Bristol, Attica, $5—2. Alonzo Havens, Wales, $4—3 J. J. Davidson, $3—4. Mrs. J. D. Van Allen, $2—5 McGreggor & Co., dip.

Woolen Knit Stockings.—1. Thomas Thurston, Aurora, Erie county, $2—2. M. L. Hungerford, Watertown, Trans.—3. Mrs. Stetson, (aged 93,) $1 and dip.

Woolen Yarn – 1. Mrs. Ira McCall, $1 and dip.—2. Mrs. E. Bishop, Downing's Fruit and Fruit Trees.

Woolen Fringe Mittens—1. J. J. Davidson, $2—2. Alonzo Havens, Trans.

DOMESTIC MANUFACTURES, No. 2—Linen.—1 Mr. E. Bishop, $8—2. Clark Avery, $6—3. A. A. Halleck, $4. Linen Diaper.—1. Mrs. E. Bishop, $6—2 Isaac Allen, $4—3 Chester Clark, Skaneateles, $2.

Linen Knit Stockings.—1. Mrs. E. Bishop, $4—2. Thomas Thurston, Trans.

Cotton Knit Stockings.—1. Samuel Hamilton, East Hamburgh, $2—2. Miss Jane Hoy, Attica, Trans.

Linen Sewing Thread.—1. Mrs. E. Bishop, $2—2. Mrs Worden Mattison, Trans.—3. Chester Gridley, Sennett, (discretionary,) Trans.

Table Spreads —Edmund Nye, Newstead, $4.

Grain Bags.—E. C. Williams, Rochester, $2.

Cotton Sheeting —S. C. Jones, Rochester, dip.

Broad Cloth.—For various kinds, diplomas were awarded to A Rollins, agent Utica Steam Woolen Company.

☞ The premiums on a great variety of miscellaneous articles, are necessarily omitted.

Tomato Catsup.—Take a bushel of ripe tomatoes gathered when dry, and boil them three or four hours over a slow fire. Then add half a teacupful of salt, and of ground cloves and pepper each six ounces, and three quarts of vinegar. Then strain the whole through a fine sieve. Then boil one hour—cool and bottle. It must be boiled in a tinned vessel. No other will do. Remember that.

Speed of Hounds.—Youatt states that a fox-hound run the Beacon course, four miles, one furlong, and one hundred and thirty-two yards, in eight minutes. Sixty horses started with the hounds, but only twelve to run with them. Flying Childers had run the same course in seven minutes and thirty seconds.

THE FARMER'S NOTE BOOK.

Refuse Lime of Gas-Works.

We have received several inquiries in regard to this article, and have had various reports in regard to its efficacy as manure. It has frequently been stated that its effects on crops for the first season, at least, were unfavorable. The following remarks by Prof. JOHNSTON, from the Scottish *Quarterly Journal of Agriculture*, afford some explanation of the matter.

This refuse lime consists of a mixture of carbonate of lime with a variable quantity of gypsum and other salts of lime containing sulphur, and a little coal tar and free sulphur, the whole colored usually by a little Prussian blue. The following table exhibits the composition of two gas-limes which have been analysed in my laboratory, the one from the Edinburgh gas-works, and the other from the gas-works in Brick Lane, London. The first two columns show what they *were* when sent to me, the second two what they *will become* after long exposure to the air, after being made into compost, or after being thoroughly and for a length of time incorporated with the soil:—

COMPOSITION OF GAS-LIMES.

As they are.	Edinburgh.	London.
Water and coal tar,	12.91	9.59
Carbonate of lime,	69.04	58.88
Hydrate of lime (caustic,)	2.49	5.92
Sulphate of lime, (gypsum,)	7.33	2.77
Sulphite and hyposulphite of lime,[*]	2.28	14.89
Sulphuret of calcium,	0.20	0.36
Sulphur,	1.10	0.92
Prussian blue,	2.70	1.80
Alumina and oxide of iron,	——	3.40
Insoluble matter (sand, &c.;)	0.64	1.29
	98.69	99.82
As they will become.		
Water and coal-tar,	12.91	9.59
Carbonate of lime,	67.39	56.41
Hydrate of lime (caustic,)	——	——
Sulphate of lime (gypsum)	16.45	29.32
Sulphite and hyposulphite of lime,	——	——
Sulphuret of calcium,	——	——
Sulphur,	——	——
Prussian blue,	2.70	1.80
Alumina and oxide of iron,	——	3.40
Insoluble matter, (sand, &c.)	0.64	1.29
	100.09	101.81

This table shows that these gas limes differ much in composition, especially in the proportions of sulphur, or of the acids of sulphur they contain. This arises chiefly from the kind of coal which is employed in the manufacture of gas in different works. In Scotland, different varieties of cannel coal are very extensively employed; in London the better kinds of Newcastle coal are chiefly used, all of which either contain or give off more sulphur than the best cannel coals of Scotland.

The most marked difference between the two samples here analysed, is in the compounds called *sulphite* and *hyposulphite* of lime. The latter of these substances dissolves readily in water, and its presence in such very different proportions satisfactorily accounts for the very different effects which have followed from the application of gas-lime to the lands in different districts. The rains dissolve the hyposulphite and the sulphuret, and carry them down in too great quantity to the roots of the young corn; and hence the complaints of some that the gas-lime has killed their wheat, while others have found, when applied as a top-dressing in a similar way that it greatly improves their crops of corn. Unless its composition be satisfactorily ascertained, therefore, unless for example, it be found that water dissolves very little of it—there will always be a degree of risk in applying it directly to the land while any corn crop is growing. There may not be the same danger in putting it between the turnip or potato drills, and afterwards ridging up the land in the way in which quick lime is applied in many districts."

Upon the whole, Prof. J. concludes that the refuse lime of gas-works ought not to be thrown away, and that it may be used with advantage, 1st, upon mossy or peaty land, and upon naked fallows; 2d, in composes in which, by the action of the air it will tend to be converted into gypsum, and will produce a similar effect to that substance; it might be useful in expelling insects from the soil.

Crops in Alabama.

Our provision crop is most abundant; the season has been fine up to the period of maturity of the corn crop; since that time, say 15th July, the rains have been heavy and frequent—so much so that the bole worm made its appearance in the cotton, in a very destructive form, by the last of July; earlier by 15 days than heretofore. The crop of cotton never presented a finer appearance than it did the present season, at the period of attack by this fell destroyer. The crop promised fair for 3,000,000 bags. Of what number it may really turn out, I shall at this moment offer no speculations. I have heard some planters say, the crop is more than half eaten up, referring of course to their own; I have seen some crops that will not make a bale to 10 acres, and I hear others make the same remark. So far as we have information the destruction is general. We have not as yet any information in reference to the matter either east or west, ont of Alabama. We are now in the midst of a cloudy wet spell of weather, favorable to the propagation of the worm, whose name is *legion* already. N. B. CLOUD. *La Place, Macon Co., Alabama, Aug.* 15, 1848.

Washing Machine.

I observe in the August number of the *Cultivator*, an inquiry as to the best washing machine, with a request for information from those who have had actual experience. The annexed figure represents one which I have used in my family for *five years*, and which is *immeasurably* preferred to all others which have been tried or heard of. Its original cost was five dollars—high enough, considering the simplicity of its construction. During these five years it has been in weekly use, and the total amount of all the repairs have not cost twenty-five cents. A boy ten years old can work it with facility; and my wife thinks it requires not more than a third or a quarter of the labor needed by the use of the best "*wash-board*"—while it does not chafe nor wear the clothes in the smallest degree.

It is worked by an alternating motion of the handle or lever A, which turns on the central hinge or pivot B, pressing the perforated board which swings like a pendulum within the trough, by means of the connecting

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[*] This includes a small quantity of cyanide and sulphocyanide of calcium, which are soluble in water, and are present, as all these compounds of sulphur are, in variable quantity.

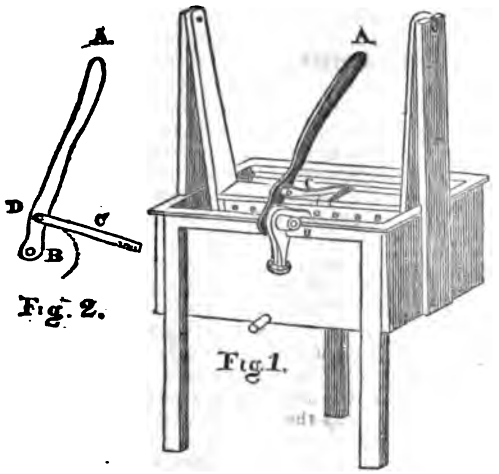


Fig. 2.

Fig. 1.

Washing Machine.

bar C, against the grooved side of the trough beyond. Fig. 1, is the whole machine; Fig. 2, the handle and bar C, detached, showing the notched end of the bar, for regulating the space for the clothes. This handle and bar are made of cast iron. The perforated board with its suspending frame are easily lifted out, when necessary.

The box or trough must be made very strong, for the pressure exerted against its side is enormous. At the first motion of the handle, it is only five or six times as great as the strength of the person working it; but as it approaches a horizontal position, the perforated bed moves slower and slower, the motion of the handle continuing uniform, and hence the "purchase" constantly increases as the handle becomes more horizontal. This will be better understood by observing the circular dotted line in figure 2, which marks the course of the pivot D.

Another great advantage of this machine is, that one's weight is thrown *upon* the handle, and it hence possesses all the advantages of the application of strength which exist in rowing a boat.

I have sometimes heard ill-bred men sneer at the attempt to save the labor of women. Such men should be invariably compelled to cook their own dinners and wash their own shirts. "But what's the reason women can't *do so much* work as they did forty years ago?" say you. "They do more work now than they did then," say I, "for women had not then become, to use the words of Dr. Alcott, such 'slaves to the everlating din of pots and kettles' as they now have." You are fond of good cooking and their hands must provide it, and in many other cases the increasing wants of the day are loading them with heavy burdens. Therefore you must provide them all the labor-saving facilities you can, if you expect to be set down as gentlemen. Besides, a good washing-machine may give you a comfortable clean shirt where you now from necessity wear a dirty one. B. X.

Potato Disease and Erysipelas.

I wish to call attention to the fact, that with the growing diseased condition of the potato rot, from year to year, there is a corresponding growth of a disease in our country, which bears a striking similitude, (as far as the comparison can be brought to bear,) to that which in potatoes is commonly called the *rot*.

This disease is frequently called *Erysipelas*, by our country physicians, because in many cases it has symptoms which appear to favor that complaint—but in the majority of cases there is a virulence of attack and decay of that part of the system in which it makes its first appearance, that marks it as a new and malignant disease.

I believe I may safely say that potatoes constitute one-third of the food consumed in the country, and among the laboring people they are usually eaten three times a day throughout the year.

Now if in fact the principle of the decay called the rot, possesses the potato at the time the blight makes its appearance among the tops; awaiting only the presence of a certain degree of heat and moisture to finish its work, does it not follow that if they are eaten in this condition as a common article of food, the poison or secret principle of decay will pervade the system and may produce the disease before mentioned?

I have been tempted to make this communication with the view of drawing attention to the matter—and am in hopes that the suggestions I have made will either prove fallacious or serviceable. Isaac S. Beers. *North Salem, Westchester Co., N. Y., Aug.* 28, 1848.

Cattle on the Highways.

It was with no common feeling of pleasure that I perused an article in your Cultivator of this month, by Mr. Bacon, of Elmwood, on the subject of preventing animals from running at large in the highway.

Hundreds of times have I been so annoyed by this nuisance that I have often contemplated addressing you an article on the subject. Mr. Allen and Mr. Bacon have anticipated me. I can only hope their suggestions may be carried out in every state in the Union. How truly does Mr. Bacon depict the evil of highway pasturing. Has not many a farmer felt it, particularly those who keep all their stock on their own farms.

I could give you a list of grievances that I have endured from the evil in question, laughable for one to read, it might be, but it hath tried my patience wonderfully, ere now.

I never think of leaving a gate open five minutes at a time; for if I did, I should be pretty sure of finding sundry animals of the swine order husking my corn or digging my potatoes. Instead of beautiful green grass growing along our highways, those interesting animals plow the sides of the road one year, and the next we reap a famous crop of smart weed Things are a little better here than they used to be, but we want much reformation yet.

Soon after coming to this neighborhood, I thought seriously of leaving it, for, not having a disposition to quarrel, I did not know but that I should be literally driven off my farm after a while. One of my neighbors had several cows who got possession of the spot before my front gate, for a barn yard at night; and though quite profitable, it was by no means agreeable, as I had to go every day with the wheelbarrow to "*remove the deposites*." The hogs of one basked under the shade of our trees, and the geese of another bathed themselves in our brooks and running streams; the latter fairly got possession, for a time, of one field.

But enough of this. I do not wish to state my own grievances, but to beg of you, if you have any love for improvement and refinement among the farmers, to raise your voice against the occupation of the highways by animals.

Show me a country where every farmer keeps his animals on his own premises, and you will show me a thrifty set of men. Let me ride or walk through a country where my path is impeded by grunters, sissers, looers, and neighers, and I will venture to call its inhabitants a slovenly set; and will henceforth report them to the Cultivator for correction.

I have been a subscriber to your valuable paper for five years, and hope to be so for twice five longer. I cannot refrain from saying again, do attend to this matter. H. C. W. *Putnam Valley, N. Y., August.*

Rearing Calves.

The lecture of Prof. Simmonds, alluded to in another place, was followed by a discussion in relation to the "best way of rearing cattle from the time they are dropped till they are a year old." As might have been expected, there was not a unanimity of opinion on the question; some, especially those who reared cattle chiefly for beef, were in favor of letting calves suck their dams for the first six months. Others preferred a different course. Mr. Turner, a noted breeder of Devon cattle, said it was the custom in his neighborhood to let calves suck for the first ten days, and at the end of that time they were taken from the cow, and three quarts of new milk given to each, twice a day. This was continued two or three weeks, according to the strength of the calf; at the end of that time they withdrew a portion of the new milk, and gave the animal some skim milk; in addition to this they gave it oatmeal, hay, and turneps, taking care that it should be kept perfectly clean, with a free circulation of air, and well littered. Two or three weeks after this the calf eats hay or grass with avidity; the new milk is withdrawn, and skim milk given. It was continued five or six weeks longer, and then the calf fed heartily on cut hay and oatmeal. It was kept in during the winter months, and then on the first sunshiny season they gave the calf the free use of his limbs. They then turned him into a good pasture, and was shifted from one to another as convenient; for he held as an essential point, that it was necessary for every young animal during the first year of its existence, to be fed on different kinds of food. The case of calves and lambs was similar in this respect with young children, and every other animal, (laughter.) His own calves were carried on in this way, being taken in at the latter end of October or the beginning of November. The yard was kept clean and well littered, and the animal had a little hay, and chopped straw, and turneps. In the winter months the animal might have mangel-wurtzel. Thus it was kept during the winter months; and when spring arrived, they turned it into the first good pasture they could, and all trouble was then at an end. He held it to be most essentially necessary that animals should not be forced.

Mr. Pelham gave calves new milk for the first fortnight; after that he gave skimmed milk, to which he added for each calf daily, a quarter of a pound of flaxseed, a quarter of a pound of bean meal, (by way of restoring the casein of the new milk,) and a quarter of a pound of molasses. He found this a satisfactory and not an extravagant plan.

Mr. Barrett said he left the calf with the cow four or five days, and then removed it to the calf pens, which are constructed so as to be very cool in summer, and sufficiently warm in winter. He preferred pens, thinking that when young calves are tied up it irritates them and produces scouring. When taken from the cow, he gave three quarts of new milk morning and evening for four weeks; at three weeks old a very small quantity of crushed linseed and chaff; at a month he added "sweet" skim milk, two quarts, reducing the new to two quarts, and increasing the quantity of linseed, chaff, and adding fine pollard; at six or seven weeks old he added skim milk, and then half a pint crushed linseed, and more chaff and pollard. The skim milk he continued as long as there was any to spare from the younger calves. He found it useless to give a very liberal allowance of new milk to a calf after six weeks old; he thrives better by using sweet skim milk, and he accounts for it in the following manner: The new milk satisfies his appetite, and he does not consume a sufficient quantity of linseed and chaff for his age. If a calf scoured, which it seldom did, he gave the following: One ounce of salts in half a pint of warm beer, stopping their milk at morning feeding time, and reducing the quantity the next three times of feeding; and should the attack be more severe, and not give way to this treatment, he boiled the milk for a few days. Should the scouring be attended with much pain, indicated by the calf groaning and looking back at its flanks, he gives one ounce of linseed oil, and takes away a small quantity of blood, according to the age of the calf, say from four ounces to eight ounces, from a week to eight weeks. Heifers should calve in April, as the grass in May forces their milk and lays the foundation for their becoming good milkers.

Mr. Shaw said he was himself a dairy farmer, and sold a good deal of milk. He never suckled more than eight weeks, and did not give after that more than a quart a day ; but he gave them oil-cake, or cut hay, to induce them to eat. By these means he got them to eat at three weeks old. He found that by giving them linseed to eat for a certain period—not too long, as he considered linseed to be a bad thing when too long continued—that a change for oat cake was the best thing.

Mr. Mechi thought the same remarks applied to the rearing of a calf as to the child of human beings. If the Almighty had provided the parent with food containing the best materials for forming the perfect animal, which no one could for a moment doubt, and if they were desirous of following nature, they must, if they removed the young animal from its mother, give it those things which come as near as possible to the mother's food. They all knew that when they reared a child they gave it food assimilating in its nature to its mother's food, as near as possible; and the same laws applied to the young of the lower animals as to the young of man. They should give food which would ensure the growth of bone, fat, and muscle. He saw an attempt to follow this principle in the food recommended by preceding speakers, who had been enlightening them. Some gave oatmeal or nitrogen; others, linseed or carbon; and they ought also to give oatcake for the phosphates. Depend upon it, they must not rely on any one meal; but they must so contrive their food that they may give the phosphates, the nitrogen, and the carbon. Whatever they found necessary to give to grow a good strong man, they would require to be given, in order to rear a strong, healthy, and valuable calf.

Rust in Wheat.

Editors Cultivator—My experience of the present season induces me to make some observations upon the above subject. On the 21st of October last, I sowed three and one-half bushels of wheat, sold me by Messrs. A. B. Allen & Co., N. York, as the genuine "white-flint," of "Wheatland." I presume it was as represented; being as large and handsome grain as I ever saw. It was scarcely as large, however, as I had anticipated, its weight being just 60 lbs. per bushel.

On the 22d of October, I sowed 6¼ bushels North Carolina Red wheat, about 58 lbs. per bushel. The soil was as nearly the same as could be, with a similar preparation, and like quantity of seed per acre. The native wheat was cut the 15th of June; the New-York the 20th; the latter being six days later than the former. In a month after their appearance there was a perceptible difference in the two, the northern having broader leaves, and being more green and vigorous. It retained its superiority throughout the growing season; the stalks being larger, and the heads decidedly superior. I expected much from this. But some fifteen days before cutting, I perceived the rust in it, and before harvesting it was materially injured. Although much shrunken, its yield nevertheless was 32 per cent. more than the native wheat. The latter had not, that I saw, a single stalk of rust throughout the lot.

Now, it is to this, to me, inexplicable fact, that I desire to call your attention. Why was it that on the same soil, under precisely similar circumstances, that the northern was so much affected, while the native was entirely free from this disease. My reading has hitherto led me to suppose the rust to be some contingency of the season. Am I to believe so still, or shall I attribute it to the seed sown, and brought with it from its northern home? If the latter, may I not expect the disease to be generated at each successive sowing.

Permit me to invite your notice to another matter incidentally brought out here. From the foregoing dates given, a difference of six days in the ripening of the two kinds is perceived. May I expect the White-flint, as it acclimates, to become earlier, like most of the northern fruits introduced into the south, or will the native retain its superiority on this point? Your views are solicited. Will. H. Wills. *Brinkleyville, N. C., Sept.* 5, 1848.

Draining.

As the subject of underdraining, and the manner of constructing drains is justly engaging the attention of many, I wish to state a plan which I think in the absence of better materials, answers a very good purpose. Every farmer who has loose stones on his farm, has the materials at hand; while at the same time he may be ridding his land of a great detriment to its proper cultivation. Dig a ditch from two to two and a half feet deep, sixteen inches wide at the bottom; lay stones six inches in diameter on each side, which leaves a water course of four inches in the centre. Take stones of larger dimensions and cover over. By drawing a quantity of stones along the line of the ditch, a selection can be made, and after placing some on each side of the top-stones, should they not fill out to the sides of the ditch, the remainder can be thrown in at random, on which can be strewed some shavings or straw, and then covered. A team and plow will greatly facilitate the covering operation. Flat stones would be preferable for covering could they be obtained, which would also prevent the necessity of digging so deep. W. Ansley. *Rushville, N. Y., August*, 1848.

Sawdust Charring and Clay Burning.

Having been repeatedly applied to for instructions for charring sawdust, and also for burning clay subsoils, containing little or no organic matter to act as fuel, I take the occasion of Mr. Whitmore's paper at the Royal Agricultural Society, as lately reported by you, to bring the two questions together, and let them answer each other. Charred sawdust is a form of charcoal particularly adapted for manure, but the difficulty is to keep so light and loose a substance from falling into the fire and burning away, if put on sparingly, or if heaped up, to prevent this from filling and choking the air-way, and thus extinguishing the fire. The clay subsoil of stiff soils, turned up and burnt, not only manures by yielding its alkaline and other fertilising ingredients, but at the same time both deepens and loosens the soil; three benefits of great importance. But such subsoils, rising in heavy clods, as contain very little combustible matter, require fuel to keep them burning; which is not always at hand, nor to be had cheap. When sawdust is within reach it is just the thing; the clay will supply the knobs to build up with, and support the sawdust with air way between; the skill of the burner being exercised in so proportioning and arranging them, that the sawdust shall fall in fast enough to keep up the fire, and moderate the air way to the charring point, without filling in so as to extinguish it. And this may be done by varying the arrangement according to the proportions. Where clay burning is the object, one ton of sawdust would probably suffice for 100 tons of clay; and where the object is to char the sawdust, I think with skilful management, two tons of clay would do for one ton of sawdust, considering that the clay does not consume and will shrink but little, whilst much sawdust falls in through the hollows, as it becomes charred; where clay is not at hand sods of peat may be used instead. Both are improved by the charcoal being disseminated through the substance of the clay, which may be easily done with the shovel before burning and while the clay is soft, but this may hardly pay for the labor unless in garden culture. There is yet another method of charring sawdust for manure, on a different principle; that is, by the heat produced in slaking lime. If wet sawdust be heaped up with fresh burnt lime, the wet will be drawn out by the lime for slaking, and the heat produced may fire the heap, and burn the sawdust to ashes; but if the proportion of sawdust to lime is very great, keeping the stones of lime far apart, the heat of slaking will be too much weakened by dispersion to produce fire. By keeping a medium, then, and covering well in from the air, we may attain a point at which fire will be produced in the heart of the heap, but prevented from breaking out to destroy the charcoal. The medium must depend more or less on the quality and dampness of the sawdust; but for that of fir, in its ordinary damp state in the saw-pit, by the changes of weather, we might try 20 bushels to one of lime, laying one fourth as a bed, mixing one-fourth of the wettest with the lime, and covering in with the remaining half. If the fire break through, more sawdust might be heaped on, and so much more charred; or if no more, the holes may be stopped with earth in the usual manner.—*Ag. Gazette.*

Diseases of Animals.

Red Water in Cows.

In perusing your journal of the present month, (August,) I learn that there has been a great mortality among cattle, resulting from a disease called red water. This name is given to it from the red color of the urine, being only a symptom of functional derangement. The *ounce of nitre!* recommended in the article alluded to, would act as a diuretic, and make the powerful animal weak; it might also change the character of the urine; at best it would only be treating symptoms, and could not possibly contribute anything towards the cure. I allude to the chronic form of this disease. The skillful surgeon will immediately recognize a derangement of all the functions, a vitiation of every secretion, and a loss of vital power. Hence we lay it down as a fundamental principle, that those who treat symptoms alone, never cure disease, and the animal often dies, a victim to the *treatment*, instead of the malady. This form of disease is considered to be epidemic, yet all animals are not likely to be attacked, although exposed to the same atmospheric influence; for, if there is a perfect physiological equilibrium between the solids and fluids, the nervous energy, and circulating system, then the animal is safe. The proper treatment of the disease is, to excite the liver and intestines to action, *which are in a torpid state;* next, to change morbid action; and lastly, to tone up and invigorate the whole system.

I was tempted to make these few remarks, from the consciousness that this malady will yield just as readily as any other to the proper remedial agents. You quote from Cole's Veterinarian, that red water is most common in cows of weak constitution; a general relaxation; poor blood, &c.; that the urine is brown and tinged with yellow. This shows that morbific matter is abundant in the system and nature is making an effort to rid herself of the offending matter, and will do so unless you interfere by the use of remedies opposed to the vital principle. Many of the drugs used at the present day, such as copper, antimony, corrosive sublimate, calomel, nitre, glauber salts, and laudanum, would kill a well animal, whatever they might do to the diseased.

You then enmerate the change in color, from yellow to brown, and lastly, resembling coffee grounds.

This shows that symptomatic fever, or constitutional irritation has set in; the cure in this stage of the disease would be very difficult.

In a few days a natural diarrhœa comes on, and the animal is better.

This is the manner in which nature attempts the cure; the diarrhœa carries off a large amount of morbific matter, which could not remain in the system without producing serious consequences, "*and the animal often gets well.*"

Here nature speaks in a language too plain to be misunderstood; we must open the sluices of the body. One pint of linseed oil should be given, and its operation assisted with injections of warm soapsuds, each injection containing a table spoonful of powdered ginger; after the bowels are evacuated, the distemper powder, sold by Stimpson, Reid & Co., 26 Merchants' Row, Boston, is the only article we use in this form of disease, and with remarkable success. The animal should be allowed a tea for a few days, composed of boneset and pennyroyal, one ounce of the former to two of the latter, infused in half a bucket of boiling water. The diet should be light and nourishing, and of the very best quality. G. H. Dadd, M. D. *Boston, August* 14, 1848.

Heaves in Horses.

In 1845, I had a horse which was worthless, for use. I was frequently told that he could not live, but he is now alive, and as well as ever. The cure was a simple one. Take the young shoots or buds of the white pine, say in May or June, boil them, and when the liquor is cold, give the horse a junk bottle full once a day, for ten days. John D. Spinner. *Herkimer, N. Y., August*, 1848.

[Our correspondent has omitted to tell what should be the relative quantities of the "shoots or buds and water, and does not tell how much the "junk bottle" should hold. It seems necessary to know what should be the strength of the decoction, and how much should be given to the horse at a dose.—Eds.]

Disease in Seep.

I have taken the liberty to ask some information as regards a disease that prevails among my sheep, through which I have this summer lost about 20 ewes and weathers. The disease commences with a discharge of pus from the nostrils, the animal falls away in flesh, has a dry cough, and the discharge is often accompanied with blood. After a time, (some linger two, three, and sometimes four weeks,) the head becomes so clogged that the animal dies. I have seen from half a pint to a pint of putrid matter run from the nose after death. On opening the head no grubs or worms can be seen, but the brain is highly inflamed.

Some of the farmers, formerly of western New-York, say it is the rot in the head, and that the sheep were often diseased in the same way where they formerly lived, but they can tell me of no remedy. I have followed Mr. Jewett's plan of injecting snuff-water up each nostril. I have fed them quantities of tar, flour sulphur in salt, rubbed the poll with spirits turpentine, and all without any visible effect.

The large Leicestershire buck that you saw with me when I passed through Albany last summer, is now attacked, and I am afraid, (unless you can inform me of a remedy,) I shall lose him. The sheep are all in good condition when attacked with the disease. Richard Ferris. *Onondaga, Ing. Co., Mich., Sept.* 9th, 1848.

[The disease above described is new to us. We hope some of our correspondents will be able to give a remedy.—Eds.]

Foot-Rot in Sheep.

We published on page 247, of the *Cultivator* for 1846, a statement of some very interesting and important facts, relative to the application of a remedy for this formidable disease, which had been tried with signal success on the extensive flocks of Humphry Howland, Esq., of Cayuga county, N. Y. He has since authorised us to add, that a continued application of the remedy has wholly removed the disease, and that not a solitary case remains; and so simple and effectual is the remedy, that had it been applied at the commencement of the infection of his flocks, it would have saved him several thousand dollars.

For the benefit of such of our readers as may not have noticed the statement two years since, we give its substance below:—

This remedy is now in use for the second season, during which time the rot has diminished from thirty per cent. to one per cent., in a very extensive flock, or only one sheep is now lame where thirty were formerly. Other flocks in the neighborhood, to which the remedy has not been applied, are as badly affected as ever.

The remedy consists in mixing flour sulphur with the salt given to the sheep, in a proportion just sufficient to discolor slightly the salt, or about one-twentieth part. They are regularly and constantly fed with this mixture the season through.

The disease being considered as allied to the itch, the sulphur mixed with oil was also applied to the backs of the sheep immediately after shearing, and whatever effect this mixture may have had upon the rot, the grease was found to have increased the weight of wool about a quarter to half a pound per head. The practice of applying oily substances externally to sheep, and the beneficial results, have been elsewhere known, and this experiment further establishes the advantage.

The cost of these materials for large flocks, may be lessened by purchasing in quantity in New-York city. Flour sulphur is often retailed at twelve and a half cts. per pound; in New-York it costs three dollars per hundred, and fifty cents additional, as freight, brings it to only three and a-half cents per pound. Lard and lamp oil are costly as external applications; but train oil, or oil of the true whale, is only about 32 cents per gallon in New-York, if bought by the barrel, or $10 per barrel; this would be enough for 2 000 head of sheep, or half a cent per head;—the sulphur mixed and the labor of application would be about two cents per head.

A preserved heart.—Dumas, the noted chemist, states that the heart of Richard Cœur-de-Lion is preserved at Rouen. It shows scarcely a trace of organic matter, but is composed almost entirely of incense in a state of powder or small particles—odorous powders being the principal substances used for embalming.

Curculio.—The Cleveland Herald says, "a neighbor has pursued the practice of shaking his plum trees every morning, and gathering his insects to destruction. His trees have now but few stung fruit upon them." We have pursued the same practice with equal success; but the insects being unusually abundant, we are compelled to collect them three times a day.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from Wm. Todd, P. Elithorp, G. H. Dadd, M. D., W. Ansley, B. X., A Subscriber, F. Holbrook, Isaac S. Beers, W. H. Wills, H. C. W., W. R. Burnett, C. C. Munsell.

Books, **Pamphlets**, &c., have been received as follows:—Speech of Hon. E. B. Holmes, on the River and Harbor bill, from Mr. H.——Seeds of a "beautiful plant," known in Wisconsin, as the "Polar Star," "Arrow Head," &c., from J. G. Knapp, Esq.——"Visit to the principal Vineyards of France and Spain, by Jas. Busby, Esq.," an old book with a new title page, the journey having been made in 1831, and the book issued in 1835, from the publisher.——"The Farmer's Cabinet," 12th vol., from Josiah Tatem.——"Catalogue of the Ashton Nurseries of Thomas Hancock," near Burlington, N. J.——"Lime and Marl: their Agricultural uses, with explanations of their properties and management," &c., by James Hyatt, Chemist of the Mount Airy Ag. Institute——"Report of Committee on Public Lands, on draining the Ever Glades, in Florida," from Hon. J. D. Westcott, Jr., U. S. Senate.——"Catalogue of the Hamilton Nursery, Canterbury, Orange county, N. Y.," from C. Hamilton, proprietor.

Imported Merino Sheep.—Mr. A. L. Bingham of Cornwall, Vt., passed through this city in August last, with twenty-one Merino sheep, nine of which were purchased of Frs. Rotch, Esq., of Butternuts, Otsego county. Six of these, a ram and five ewes, were imported by Mr. R. from France in 1846. The remainder of the lot, except one lamb, were imported from the same country the present season, by J. A. Taintor, Esq., of Hartford, Ct. These sheep are of the stock noticed by us in our December number of last year, (vol. iv. p. 383.) They are of great size, and have generally robust and strong frames, indicating hardiness of constitution; their wool is remarkably thick on the body, giving great weight of fleece, of a quality similar to what is usually produced by the Merinos in this country. Under proper management, we think they are calculated to improve many of our flocks.

Durhams for Vermont.—Mr. Bingham also purchased of Mr. Rotch, five yearling Durham heifers. Mr. B. designs to breed these to his Hereford bulls, of which he and his brothers have several fine ones, from the herd of Messrs. Corning and Sotham, formerly kept in this vicinity. Mr. Bingham is deserving of much credit for the spirit he has evinced for the improvement of the live-stock of Vermont.

South Down Sheep.—The advertisement of Mr. McIntyre, in relation to his flock of South Downs, is worthy the attention of all who are disposed to make a trial of this valuable breed, or who may wish to procure animals to cross with their present stock. Mr. McI. has bred his sheep with the greatest care, and their general excellence is well known. His late purchase, (to which allusion is made in the advertisement,) comprises some first rate animals, so that the character of his flock will be kept up.

Fumigating Plum Trees.—In our last number mention was made of the practice of Caleb Hall, of Blue Rock, Ohio, in keeping the curculio from his fruit trees. In a letter since received from Mr. J. L. Cox, of Zanesville, the process alluded to is more fully described. "Mr. Hall," (it is said,) "melts the brimstone in an iron pot, and woolen rags are then dipped in it. Once in five or six days, between sundown and dark, he fumigates the trees by means of a pole, to which is attached the rag of burning brimstone. He begins as soon as the blossom falls from the tree, and continues while there is any sign of the insects."

"The Pie Apple."—We published a notice of a variety of apple by this name in our volume for 1847, p. 85. The writer of that notice, Mr. S. Worden, of Oswego, sent us a box of the apples in August last. They had been packed in saw-dust for several days, when they reached us, and were over-ripe, which prevented their real qualities from being ascertained. It is a very handsome apple—fair, and of good size; and we should think would, when taken at the proper time, rank among the best-flavored apples of the season. Mr. Worden informs us that it loses much of its flavor by being kept beyond its time. It is said to have been brought from one of the Eastern states about thirty years ago, by Mr. Moore, whose father raised it from seed. Mr. W. states that some have given it the preference over the Early Joe.

Annual Exhibition of the Albany and Rensselaer Horticultural Society.—The second annual exhibition of this society, was held at the Old State Hall, Albany, on the 14th and 15th of September. Considering the entire want of plums in this vicinity, the present season, the display of fruits was good. The show of flowers was fine, and in tastefulness of arrangement was superior to any former occasion. Vegetables were abundant, and excepting the very common fault of being over-grown, were of a quality creditable to the producers.

We noticed fine samples of new and choice kinds of pears from S. C. Groot, of Schenectady, J. J. Thomas, Macedon, Mr. Rankin, Newark, New-Jersey, D. T. Vail, and H. Vail, Troy, Judge Harris, Judge Parker, and Dr. Wendell, of Albany.

There were some good samples of peaches from Mr. Rankin, Mr. Thomas, and Mr. Vail.

Fine specimens of apples were shown by Mr. Prentice, Dr. Ward, Mr. Vail, Mr. Kirtland, and others. V. P. Douw, Greenbush, Mr. Rathbone, Kenwood, H. Vail, Troy, and Mr. Rankin, of New Jersey, showed very good samples of choice kinds of grapes. Melons of several kinds were shown by D. T. Vail, Dr. J. Wilson, Dr. Wendell, and Mr. Kirtland. The *Bokhara* melon, shown by the latter gentleman, was pronounced of very superior quality.

The principal contributors of flowers were Messrs. Wilson, Menand, Newcomb, of Pittstown, Rens. county, D. T. Vail, Dr. Wendell, Mr. Douw, of Greenbush, and the president of the society, Mr. Rathbone. The latter gentleman presented a "floral design," in the form of a candleabra, composed of a great number of different kinds of flowers, most beautiful in appearance, which elicited much admiration. The bouquets of Mr. Wilson were also, (as they deserved to be,) much praised.

Among the vegetables we noticed a superior kind of cabbage, from John H. Willard, Troy. Some of the heads weighed nearly twenty pounds each. The quality is *first-rate*.

Exhibition of the Rensselaer County Ag. Society.—The annual exhibition of this Society took place at Troy, on the 20th and 21st of September. The display was good, though unfavorable weather on the first day, probably prevented as full a competition as there would otherwise have been. There was a numerous array of cattle—working oxen, cows, heifers, and several bulls. Geo. Vail, Esq., had some handsome specimens of his noted herd of Durhams. There was also some good stock from Mr. Haswell, of Hoosick, and J. H. Willard, of Troy. We particularly observed a young cow of remarkable points for the dairy, offered by Jacob Y. Kip, of Brunswick. We noticed some very fine fat pigs, five months old, from R. C. Derick, of Pittstown. There was a large show of implements, of fine workmanship. The in-door departments were well filled. The show of fruits was hardly as good as last year; but there were some fine specimens of apples, pears, and grapes, from Messrs Vail, Warren, and others, of Troy, and Briggs, of Schaghticoke. There was a large display of fabrics and fancy articles.

This Society has leased a piece of land for its exhibitions, which has been enclosed with a high fence; and a large building has been erected for the reception of articles to be shown. Permanent fixtures have also been put up for the cattle. The pens for sheep and swine, are of the movable fence, made by Mr. Coons, of Lansingburgh. They are very convenient, and when not in use are taken down and put under shelter. The enclosure is spacious, and the whole arrangement good. The plan is worthy of adoption by other societies.

Death of an Old Sheep.—In our volume for 1846, page 147, there is a notice of a Merino ewe owned by J. S. Pettibone, Esq., of Manchester, Vermont, which was then in her nineteenth year. Mr. P. has several times sent us wool from this sheep. He informs us that she is now dead, having had one of her legs broken, from which injury she did not recover. Mr. P. says "she was 21 years old, and at the time she met with the accident, bid as fair to live another year as at any time for the last three years. I send you a lock of her wool, which I think is as fine as she ever produced, showing that it has not grown coarse with age." The wool is certainly very handsome for what is called Merino; but we are inclined to think the fact of the fleece not having deteriorated in fineness, is rather an exception to a general rule. The sheep alluded to is a remarkable instance of the longevity to which the Spanish sheep is capable of reaching. We have been induced to refer to it particularly from the fact, that the statement of a competitor, in the class of Merino sheep, at the late fair, was doubted by some, viz., that one of his sheep, (a ram,) was 16 years old.

Seedling Apple.—We have received from Mr. Job T. Whipple, of Union Village, Washington County, a sample of apples produced by a tree raised, as is stated, by the father of Mr. W. It is a large, fair apple, handsomely flecked and striped with red. Its quality is very good, though generally a little over-ripe at this this time, (Sept. 21.) We should think it well worthy of propagation. Mr. Whipple thinks so highly of the kind, that he has grafted it to a considerable extent, and has some trees of the kind for sale. The apple was shown at the late exhibition at Troy, and was approved by several pomologists.

☞ We have received from Salmon Hutchinson, Ithaca, N. Y., a sample of seedling peaches, which originated with him. We are sorry to say that they were so much decayed when they arrived, that it was impossible to decide on their quality.

Illustrated Natural History.—Edited and compiled by Dr. A. B. Strong, author of the "American Flora." The design of this work is to furnish popular descriptions of the various subjects of natural history, accompanied by illustrations. It is published monthly by Green & Spencer, 140 Nassau street, New-York, at one dollar a year.

Notices of New Publications.

The American Flora.—This is a monthly periodical, the third volume of which is now being issued. Each number contains sixteen pages of letter-press, printed on fine paper, and four colored engravings of plants or flowers, taken from nature; accompanied by descriptions giving their properties, uses, methods of propagation and culture. The work is handsomely "got up"—is edited by Dr. A. B. Strong, and published by Green & Spencer, 140 Nassau street, New-York, at three dollars a year in advance.

British and Foreign Medico-chirurgical Review.—This excellent work, of which we have frequently spoken, continues undiminished in value and interest. It is issued quarterly in London, and is republished in New-York, by R. & G. S. Wood. Each number contains 275 pages, comprising a view of the latest discoveries in medicine and surgery. It is a work of the highest reputation in its kind, and should be in the hands of every member of the faculty. Terms three dollars a year.

American Journal of Science and Arts.—The number for September is before us. It is filled with valuable matter, among which we notice the following articles: On the Anomalies presented in the Atomic volume of Sulphur and Nitrogen; with remarks on Chemical Classification, and a notice of M. Laurent's Theory of Binary Molecules; by T. S. Hunt: A new Method of extracting Pure Gold from Alloys and from Ores; by C. T. Jackson: Description of Shells found in Connecticut, collected and named by the late Rev. J. H. Linsley; by Augustus A. Gould, M. D.,—with many other interesting articles. Much credit is due the editors of this work, Professors Silliman and Dana, for the ability with which it is conducted. Published at New Haven, on the first day of every second month, at $5 per year.

Journal of Agriculture and Transactions of the Highland and Agricultural Society of Scotland.—Published quarterly, by Blackwood & Sons, Edinburgh and London. This is one of the ablest of the periodicals devoted to Agriculture. It is, in fact, two separate works—the different pages belonging to each, being issued under one cover, and at the end of the year are to be formed into their respective volumes of Journal of Agriculture, and Transactions of the Highland and Agricultural Society of Scotland. The contributors are some of the best-informed and most distinguished in Scotland and England; such as Prof. Johnston, John Towers, Thos. Rowlandson, Alfred Gyde, James Duncan, J. H. Fennell, and many of the best agriculturists in Great Britain. The Transactions consist of prize essays and original papers brought out by the Society, and are of high character in a scientific and practical view.

Drying Fruit.—Apples are usually dried on scaffolds, or strung on twine, (a bad practice for several reasons,) but where many apples or peaches are intended to be dried, some kind of a dry house is generally prepared for the purpose. These are of various forms and constructions. The most simple is made by erecting over a kiln a rude log or board building, leaving the flue and chimney outside, so as to supply the flue with fuel without entering the building, and to permit the smoke to pass off on the opposite side. Inside, in addition to the kiln, a number of shelves are set up, to receive the fruit. In some of these a small stove is introduced, and the kiln omitted, or only used occasionally. A better kind are made of frame work, weather-boarded, or of brick, with a stove and shelves, are used.

The best dry house should be constructed of frame-work, boarded, and the sides and ends, except a door-way, filled with drawers, with slat bottoms, to push in and pull out, from the outside, like the drawers of a bureau. They need not be more than three or four inches deep. A large quantity of fruit may thus be dried in a small room heated by a stove.

The Honey-Bee in America.—The native tribes of America say that hive-bees were originally introduced among them from Europe, but when and by whom none of them could tell. The only name they have for them is the "white man's fly," and they regard their wider diffusion as indicating the encroaching progress of the white settlers. It is said that the first planters in New England never saw any bees there; that the English introduced them to Boston in 1670; and that since then they have spread over the whole continent. Washington Irving has written an account of the progress which the hive-bee is making westwards in America; and about sixty years ago, when Bartram inquired how it was that westward, among the Creek Indians, he had seen no bees, he was told by a Dr. Grant that there were few or none west of the Isthmus of Florida, and but one hive in Mobile, which had been lately brought from Europe, the English supposing that there were none in the country, not finding any when they took possession after the Spanish and French. Bartram was also assured by the traders that there were no bees in West Florida, which he thought extraordinary and almost incredible, since they were so numerous all along the eastern coast, from Nova Scotia to East Florida, even in the wild forest, as to be thought by the generality of the inhabitants aborigines of that continent. At the present time the honey-bee is abundant throughout the United States, both as a denizen of the forest and a dependant on man. Generally speaking, the settler in the backwoods prefers the precarious but luscious supply afforded by those swarms which have deserted man, and taken up their abode in fissures of rocks or hollows of trees, to the more regular, but less abundant supply, from hives of his own.

The author of *A Tour on the Prairies*, says the Indians regard the bee as the harbinger of the white man, as the buffalo is of the red man; and say that in proportion as the bee advances, the Indian and the buffalo retire. The wild bee is said to be seldom met with at any great distance from the frontier. When the honey-bee first crossed the Mississippi, the Indians, with surprise, found the hollow trees of their forests suddenly teeming with honey; and nothing can exceed the greedy relish with which they banquet for the first time upon this unbought luxury of the wilderness. At present, the honey-bee swarms in myriads in the noble groves and forests that skirt and intersect the prairies, and extend along the alluvial bottoms of the rivers.—*Useful Insects and their Products*, by J. H. Fennell.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Sept. 20, 1848.

FLOUR—Genesee per bbl. $5.87½a$5.94—Extra brand, $6.25a $7.25

GRAIN—Wheat, Genesee, per bu., $1.34—Southern, $1.15—Corn. 56a60 cts.—Rye, 68c.—Oats, 34a35c.—Barley, 75c.

BUTTER—Best Goshen, per lb., 20a25c.—Western, dairy, 14 a 16c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $13a$13.50—Prime, $6a6.50

PORK—Mess, per bbl., $12.75a$13—Prime, $9.75.

LARD—in kegs, per lb., 9a9½c.

HAMS—Pickled, per lb., 5½a6c.

HEMP—American dew rotted, per ton, $135a$140.

HOPS—First sort, per lb., 4a5c.

TOBACCO—Virginia, per lb., 2½a6½c.

COTTON—Upland and Florida, per lb., 5½a7½c.—New Orleans and Alabama, 5a8½c.

PLUM STOCKS.

THE subscriber offers for sale 100,000 good strong seedling Plum Stocks.

Messrs. King and Ripley, and other nurserymen who have used these plum stocks, prefer them to the imported or any other sort ever tried by them.

None less than 15 inches high will be put in.

Price $10 per 1,000—$90 for 10,000, delivered in New-York.

Also, a large collection of Fruit and Ornamental Trees, Grape Vines, &c. Apply to SAMUEL I. GUSTIN, Newark, N. J.

Oct. 1—2t.

FRUIT TREES.

THE Subscriber now offers for sale at his nursery in Canterbury, Orange County, N. Y., a general assortment of Fruit Trees, embracing all of the most valuable varieties of fruit, with many that are new and Rare. And having obtained them all from the best sources, or from bearing trees of well known varieties, and proved a large proportion of them on his own grounds; and the budding and marking of all his trees being done with his own hands, assisted by his Son; and devoting his entire attention to fruit trees only, he believes them to be equally correct with those of any other establishment.

His stock of APPLES, embracing many thousands, is large and very thrifty, at $20 per 100.

Trees of small size for the Western States, at low prices.

With grafts of all the varieties at low rates.

See Catalogue, which will be sent to all *post paid* applicants.

Also for sale, 30,000 SEEDLING PLUM STOCKS, one year old, and 5,000 one year old BUCKTHORN PLANTS.

Canterbury, Oct. 1, 1848.—1t. CHARLES HAMILTON.

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES, *Flushing, N. Y.*

WM. R. PRINCE & CO. Successors of Wm. Prince, and sole proprietors of his great collection, offer the largest and choicest assortment of

Fruit and Ornamental Trees and Plants,

To be found in America; and will transmit *Descriptive Catalogues* to all post paid applicants desirous to purchase.

The choicest varieties of fruit which are scarce elsewhere, are here extensively cultivated, and applicants will not be disappointed. Every desirable fruit enumerated by Downing, Manning, Kenrick, and Hovey, and in the Catalogues of Europe can be supplied. Of the finest varieties of Pears, 50,000 trees can be supplied, of which 15,000 are of bearing age on both the Pear and the Quince. Purchasers are solicited to visit the establishment and judge for themselves; but the same attention will be paid to the selection for all distant correspondents. The prices are as low, and mostly lower than trees of equal quality can be elsewhere obtained. And above 500 varieties of Fruit Trees, and a much larger number of Ornamental Trees can be suppled, that cannot be obtained elsewhere in the Union, except in a few casual instances.

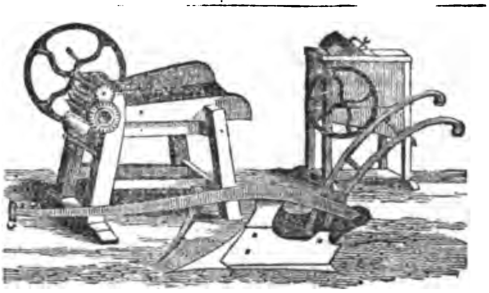
Every premium for Roses and Strawberries, was awarded to us by the Long Island Horticultural Society.

A Wholesale Catalogue will be sent to all venders.

The transportation expense to the West is now moderate, and the Agents' Receipt will be sent to each purchaser, which will prevent the possibility of loss. Cash or a reference can be sent with the order, by those who are strangers to us.

N. B. We caution the public against a spurious use of our name and title by a man named Winter, who never purchased any trees from the late Wm. Prince, and is calculated to deceive many.

Oct. 1.—1t.



JOHN MAYHER & CO.,

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New-York, which will be sold at lower prices than they can be purchased at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co.'s celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

FRUIT TREES.

THE Subscribers are now ready to receive orders for superior TREES viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, &c, from their new nursery. Trees all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention

WILSON, THORBURN & TELLER.

☞ Also, a fine assortment of choice varieties of the Pear on Quince stocks, or dwarf pear trees.

Albany, Oct 1, 1848—2t.

NEWBURGH NURSERY—FRUIT TREES.

THIS Nursery contains a general assortment of fine, thrifty trees, consisting of

Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Raspberries, Gooseberries, Strawberries, &c.,

Of the most approved kinds. Also many that are new and rare, of recent introduction.

All orders (post-paid,) will be carefully attended to by the proprietor—Catalogues sent on application.

CHA'S. DOWNING.

Newburgh, Orange County, N. Y., Oct. 1, 1848.—2t.

PARSONS & CO.

INVITE the attention of dealers and amateurs to the large and excellent stock of trees at their COMMERCIAL GARDEN & NURSERY, at Flushing near New-York.

The personal attention of the proprietors to the propagating department, and their possession of well arranged specimen grounds, enable them to ensure the correctness of the varieties which they cultivate.

Their Fruit department contains of APPLES, 210 varieties, of which among the best are,

Early Harvest, Strawberry, Autumn Bough, Maiden's Blush, Willis' Sweeting, Fameuse, Porter, Gravenstein, Sturner Pippin, Tower of Glamois, Northern Spy, Yellow Bellflower, Baldwin, Hubbardston Nonsuch, Herefordshire Pearmain, Peck's Pleasant, Swaar, Rhode Island Greening, Newtown Pippin, White Seeknofurther, &c., &c.

PEARS, 180 varieties, including,

Bartlett, Madeleine, Summer Francreal, Beurre d'Amalis, Dix, Fondante d'Automne, Louise Bonne de Jersey, Duchesse d'Angoulême, Easter Beurre, Columbia, Beurre d'Aremberg, Lawrence, Vicar of Winkfield, &c., &c.

CHERRIES, 70 varieties, including,

Black Eagle, Downer's Late Red, Black Tartarian, Elton, Bigarreau, Early Richmond, Mayduke, Belle de Choisy, &c., &c.

PLUMS, 75 varieties, including,

Imperial Gage, Jefferson, Yellow Gage, Washington, Smith's Orleans, Duane's Purple, Ickworth, Imperatrice, Lucombe's Nonsuch, &c.

PEACHES, 80 varieties, including,

Crawford's Early, Crawford's Late, Early Tillotson, Early York, George 4th, Late Admirable, White Rareripe, Royal George, White Imperial, Heath Cling, Old Mixon Cling, &c., &c.

NECTARINES, 14 varieties, including,

Boston, Violet Hative, Red Roman, New White, Hardwick's Seedling, &c., &c.

APRICOTS, 14 varieties, including,

Early Peach, Moorpark, Schuyler's Large, Dubois' Golden, Large Red, &c., &c.

Also, Quinces, Grapes, Figs, Almonds, Walnuts, Raspberries, Currants, Strawberries, Esculent Roots, &c.

THE ORNAMENTAL DEPARTMENT, comprises all the most desirable Ornamental, Deciduous and Evergreen Trees and Shrubs, Vines, Creepers, &c., in some 800 varieties, many of which are new, and rare, and valuable for Arborateims.

Also, Roses, Hedge Plants, &c.

Catalogues furnished *gratis* on application by mail at Flushing, or personally at 10 Pine street, New-York.

Oct. 1.—1t

BRANCH NURSERY OF PARSONS & CO.,

At Brighton Depot, near Boston.

THE Proprietors invite the attention of their Eastern friends to their grounds at Brighton, to which they have transferred a large assortment from their establishment at Flushing.

The entire success of the trees transplanted there the past season enables them to recommend this stock with confidence.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

Late A. J. Downing & Co.

THE undersigned beg leave to inform their patrons and the public in general, that their stock of

FRUIT & ORNAMENTAL TREES, SHRUBS, &c., &c.,

For Autumn planting, is unusually large and thrifty, especially PEARS, PLUMS and APPLES; of most of the standard varieties of the latter there are several thousand trees, three and four years old, of large size suitable for orchard planting, together with a general assortment of Cherry, Peach, Nectarine and Apricot trees. Also, Grape vines, small fruits, &c., &c.

Pear on Quince Stocks.

Portugal Quince Trees, standard height, 6 ft.,	$1 00
" " quenouille " "	1 00
Angers (*true*) " " " "	1 00
Smaller trees of the above, price,	0 50

Hedge Plants.

Buckthorn, 2 year old, per 1000,	$ 9 00
Osage Orange, " per 1000,	12 00

The ORNAMENTAL DEPARTNENT is full and complete; for particulars see Catalogue, a new edition of which is just issued for 1848 & 49, and will be sent to all post-paid applicants.

Orders respectfully solicited, and will receive prompt attention, which will be carefully packed and shipped to any part of the Union or Europe.

N. B. Catalogues to be had gratis of the agent in N. Y., GEO. G. SHEPHERD, 143 Maiden Lane, and at the office of "THE CULTIVATOR," Albany.

A. SAUL & CO.

Highland Nurseries, Oct. 1, 1848.—2t.

SENECA LAKE HIGHLAND NURSERIES.

FRUIT and Ornamental Trees, Flowering Shrubs and Plants, Roses, Dahlias, Strawberries, Greenhouse plants, Hothouse plants, Annual Flowering plants, &c., &c., cultivated and for sale at these Nurseries.

5,000 Trees, of the new and celebrated DOUSE or HAWLEY, which for flavor, size and productiveness, is the unrivalled Fall Apple. Also, the Early Joe and Northern Spy.

Trees carefully packed, so as to be safely forwarded to any part of the country.

All packages put on board the Steamboats on Seneca Lake, free from charge. Priced Catalogue, describing the advantages of purchasing trees at this location, and much Horticultural information furnished gratis, to all who apply, if by mail, post paid.

E. C. FROST,

Catharine, Chemung county, N. Y., Oct. 1.—1t.

FRUIT TREES FOR SALE.

THE subscriber has for sale at his nursery, (Fishkill Landing, Dutchess county, N. Y.,) a general assortment of Fruit Trees, embracing many of the most valuable kinds of Apple, Cherry, Peach, Plum, Pear, Nectarine and Apricot trees; and a large quantity of the market fruit trees, among which are the Frostgum, Napoleon Cherry; Rhode Island Greening, Newtown Pippin, and Baldwin apple; Isabella grape vines and Orange Quince Bushes.

Also a splendid lot of the EARLY GOLDEN APRICOT Trees. This Apricot still maintains its high reputation, having withstood the severe frost of last Spring, which killed the fruit buds of several kinds of the Peach and Apricot trees. These trees have been sent within the last year, to all latitudes of the United States; and from the extreme parts they give the most promising prospects of success.

Also, a few thousand Fir and American Linden Trees.

Trees will be furnished on as low terms, and packed in as careful a manner, as at any other establishment of the kind. When desired, small trees will be supplied at corresponding prices. Catalogues sent to all applicants.

CHARLES DU BOIS.

Fishkill Landing, Oct. 1, 1848.—1t.

TO NURSERYMEN, ORCHARDISTS, AND PLANTERS.

THE subscriber offers for sale at his nurseries, Plymouth, Mass. Pear, Quince, Cherry, Plum, Apple, and Dwarf Apple, (Paradise) stocks, suitable for budding next August, or for Spring grafting. Also, the following ornamental tree stocks, from two to three feet high and stout: viz. Mountain Ash, Oak, Hawthorn, Elm, Spanish Chestnut, Horse Chestnut, Birch, Beech, Ash, Norway Maple, Sweet Brier, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Spruce fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.)

Also, 50 of the finest sorts of PEARS, standard and dwarf.

Priced list sent to post paid applicants.

Oct. 1.—4t.

B. M. WATSON.

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city.

April 1—tf.

TO SEEDSMEN AND NURSERYMEN.

ORDERS will be received by the undersigned for the purchase and transmission of seeds, plants, shrubs and trees, from the most celebrated French Nurseries, on moderate terms and with despatch. LIVINGSTON, WELLS & CO., 10 Wall-st.
New-York, Sept. 1, 1848.—2t.

NURSERY OF J. J. THOMAS.

Macedon, Wayne Co., N. Y.

THIS Nursery now contains many thousand fine trees, of large, handsome, and thrifty growth, consisting of Apples, Pears, Peaches, Cherries, Apricots, &c., of the best standard sorts, as well as the finest only of new and newly introduced varieties; all of inferior merit being rejected; *and in no case are any propagated for sale except those thoroughly proved in bearing.*

When purchasers desire, selections of the best for affording a regular succession of fruit through the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y.

MERINO SHEEP FOR SALE.

HAVING arrived at a point in which I desire to reduce my stock of Sheep, I have therefore concluded to sell about 600 Merino Sheep this fall, which have been bred with great care, and are inferior to none in the United States—200 of which are half bloods, from the importation made by Mr. Taintor. Nothing need be said to recommend them, for they recommend themselves.
Cornwall, Sept. 1, 1848.—3t. A. L. BINGHAM.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,
May 1, 1848—6t. Cabotville, Mass.

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c &c.
F. A. GIFFORD.
Hudson, May 9, 1848—5t*

GRANT'S PATENT FAN-MILLS.

I. T. GRANT & CO, Junction, Rensselaer county, N. Y, continue to manufacture these celebrated mills. They have been awarded five first premiums at the New York State Fairs and the Fairs of other States, and in no instance has any other mill of the kind received a premium over them. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the last year they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains as before. Our *agents* are H. L. Emery, Albany; G. S. & F. A. Willis, Pittsfield, Mass; Parsons & Dickinson, Springfield, Mass., John Mayher & Co., 195 Front Street, New-York; Benj. Myers, Newark, N. J.; S. & E. Hasbrook, Stone Ridge, N. Y.; James S. Brown, Newburgh, N. Y.; H. Warren, Troy; Hugh Van Alstyne, Kinderhook; S & M. Peckham, Utica; E. Whitman, Jr., Baltimore, Md.; Fitzhugh Coyle, Washington, D. C; Denslow & Webster, Savannah, Geo. Address I. T GRANT & Co., Junction, P. O., Rensselaer county, N. Y., by whom all orders will receive prompt attention. Sept. 1—4t.

NOW landing from ship Aglare, a very superior cargo of Patagonian Guano. Price $35 per ton, for all quantities exceeding 1,000 lbs. Apply at the New-York Agricultural Warehouse and Seed Store, Nos. 189 & 191 Water-street, New-York.
July 1, 1848.—2t. A. B. ALLEN & Co.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent. lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction.

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers. E. J. BURRALL.
Geneva, April, 1848—6t.

GREATEST IMPROVEMENT OF THE AGE.

Smith's Lever Drill.

Patented November 4, 1846, to H. W. SMITH.

THE advantages of this machine as fully established by use and experiment, are

1.—A saving of from two to three pecks of seed per acre.

2.—An equal distribution of any given quantity of seed, covered at a uniform depth.

3.—A saving of labor; a boy and team, with this machine, can complete from 8 to 10 acres per day; and the surface of the soil is left in such a position that it does not encrust, and undergoes a constant course of natural cultivation by the action of every shower, so that the gases and atmosphere readily penetrate,—hence,

4.—The grain is not so liable to be thrown out by frost.

5.—It stands firmer and stronger, and is not so liable to be injured by rust or the fly.

6.—Where these machines have been used, the saving of seed and increase of product, amounted to from 20 to 25 per cent.

The great improvement in this machine, over all others of the kind, is its simplicity, durability and economy, and the facility and certainty with which it can be *set* or *altered* by a regulated *index* and *guage* to drill or plant any given quantity of grain per acre, at any given depth.

These machines are now being made at Syracuse.

County rights to manufacturers sold on reasonable terms.

For further particulars address the undersigned, post paid at Syracuse. C. MASTEN,
Aug. 1, 1848.—3t.

THE PLOW, THE LOOM AND THE ANVIL.

AN Agricultural Journal published *monthly* in Philadelphia, (as successor to the Farmer's Library,) by G. B. ZIEBER & Co., edited by J. S. SKINNER & SON.—Terms, five copies for $10, two copies for $5, and three dollars for a single subscription. The object of this Journal, as its title indicates, is to discuss and disseminate, with zeal and earnestness, not only the philosophy and practice, but also the *political economy* of American Agriculture. It is designed to convince the Farmer and the Planter, that encouragement and preference of American over foreign labor, in every brach of industry for which we have the climate and materials, is a question which interests *the cultivators of the soil above all classes of people:* and to show that what American Farmers most need now, is not so much instruction how to *use the plow*, but how and by what policy we can have the greatest number of thriving consumers, demanding here at home, the products of the plow. In a word, "THE PLOW, THE LOOM, AND THE ANVIL," is designed to show that, instead of a precarious dependance on ever fluctuating and uncertain *foreign* markets, as recommended in reports and speeches published and widely disseminated by the General Government, and by the New-York State Agricultural Society, our best and surest reliance under a wise policy, would be, on the *home market*, by giving fair and steady encouragement to *American Industry*, employed, and consuming at home, the products of American Husbandry.

In this earnest undertaking to propagate, what is believed to be the true conservative doctrine the Editors have the countenance and good will of many of the most highly gifted and patriotic men of our country. Mr. Skinner is giving to it all his time and abilities, and relying on its success exclusively, as his only means of support. All he asks is that those who wish it success, will *subscribe at once;* and those who are opposed to his views will read attentively and judge as impartially as fixed opinions will allow.

Of all improvements in practical agriculture, and in the structure of the implements employed in it, the reader will be kept advised. The editors solicit "aid and comfort" from all the friends of domestic industry, *in all its forms:* not to be rendered as to the "agitators" in favor of free trade, in hard money, gratuities by thousands and hundreds of thousands, but by two neighbors in a V, and by clubs of five in a X.

Now among the oldest of the Editorial Fraternity, he will feel greatly obliged to any one of them who will give this one insertion, as it is kindly done here. Editors and Publishers take the risk of the mail. No formality is necessary, except to say—J. S. Skinner & Sons, or G. B. Zieber & Co., Philadelphia. $5 enclosed for two subscriptions. A. B.———Post Office.
C. D———Post Office.

Or, in this wise $10 for five subscribers and their address.

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CIDER MILL SCREWS.

THE Subscribers are prepared to supply orders for Cast Iron Cider Mill Screws and boxes complete.

Also, Steam Engines, Mill Gearing, and Castings in general.

JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver Street, Albany.
October 1, 1848—2t.

LARGE STOVES.

THE Subscribers are making the largest and best Stoves in market for Dairymen, Planters, and Hotel keepers—to which their attention is invited. JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver st., Albany.
Oct. 1, 1848—3t

BLOODGOOD NURSERY, *Flushing, L. I.*,
KING & RIPLEY,

PROPRIETORS of this well established nursery, offer for sale one of the largest varieties of good size

Fruit and Ornamental Trees,
Evergreens, Grape Vines,
Raspberries, Strawberries,
Flowering Shrubs and Hedge Plants,

Ever offered to the public.

Orders sent to them at Flushing, L. I.; or 244 Pearl st., New-York, (where Catalogues may be obtained gratis,) will receive prompt attention, and the trees packed with much care for transportation. Oct. 1—1t.

SOUTH DOWN SHEEP.

THE Subscriber offers for sale, several very superior Southdown Rams and Ewes, (from lambs to 4 years old,) some of which are imported animals.

Great care has been taken, and no expense spared to raise up this stock to a high standard. He has lately added to his former stock, several fine animals, many of which were selected personally by their former owner, from some of the most noted flocks in England.

Applications may be made either personally, or by letter, addressed to J. McD. McINTYRE, Albany.
Oct. 1.—3t.

TO PLANTERS.

WANTS a situation as Farm Overseer, a Scotchman, about 30 years of age, *Married*, who has a thorough practical knowledge of Agriculture, in all its branches, as also the management of stock of all kinds. Has had very extensive experience in the management of Short Horn Cattle and Sheep, has been about two years in America. Can produce the most unexceptionable testimonials as to character and abilities; and would endeavor steadily to forward his employer's interests.

Apply, *post-paid*, to A. W., office of the Cultivator, Albany.
Oct 1—1t.*

GUANO.

A Superior lot of Patagonian Guano just landing—put up in tight casks, thus preserving all the ammonia—for sale at two cents per lb., at the Agricultural Warehouse of S. C. HILLS & CO. 43 Fulton St., New-York.
Oct. 1, 1848—3t.

TO NURSERYMEN, GARDENERS AND HORTICULTURISTS GENERALLY.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes by a faithful attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References—A. J. Downing, Esq. and A. Saul & Co., Newburgh, H. Reid, Murry Hill, N. Y., and Elizabethtown, N. J.

GEO. G. SHEPPARD,
143 Maiden Lane, New York.

N. B Orders for Russia Mats, for Budding or Packing, immediately supplied.

New-York, Oct. 1, 1848.—2t.

FRUIT AND ORNAMENTAL TREES.

THE Subscribers wish to inform their customers and the public that they have now on hand, and will offer for sale during the ensuing planting season, a large stock of Fruit Trees, consisting in part of,

50,000 *Apple Trees, suitable for orchard planting.*
20,000 *Pear do do do*
15,000 *Cherry do do do*
15,000 *Peach do do do*

Besides large quantities of APRICOTS, PLUMS, NECTARINES, QUINCES, GRAPES, and all the small fruits. The trees are vigorous and healthy, and the collection comprises all the leading standard sorts, as well as nearly all the rare and choice ones recently brought to notice. All have been propagated under the personal supervision of the proprietors, whose care, experience, and entire devotion to the business, give the public a reasonable guaranty for accuracy. A large share of attention is paid to the culture of GARDEN TREES, and the stock of

Apples on Paradise Stocks,
Pears on Quince, and
Cherry on the Mahaleb,

Is probably the largest in the Union All the famous native fruits of Western NewYork, can be supplied genuine, propagated from bearing trees. Immense quantities of young trees suitable for distant transmission can be supplied.

The stock of Ornamental Trees is very large, and quantities for planting streets, public grounds, &c., or to dealers, can be furnished very low:

Hedge Plants can also be furnished by the 1,000, or 10,000 comprising

Norway Spruce, Arbor Vitæ, Hemlock,
Red Cedar, English and American Thorn,
Buck Thorn, Osage Orange, Honey Locust,
Privet &c.
50,000 *Plum Seedlings, 1 Yr. old,*
30,000 *Quince, of the best sort for Pear stocks.*

Besides large quantities of Rhubarb, Asparagus, Sea Kale, and all other articles in the nursery line, at reduced rates.

Trees and plants will be packed in the best manner, and shipped to any part of the Union.

A new catalogue for 1848 and 49' is just published, and will be sent gratis, to all postpaid applicants. Wholesale catalogues sent when desired.

Orders should be forwarded immediately. Address,
ELLWANGER, BARRY & ROWE,
Oct. 1.—1t. Mt. Hope Garden and Nurseries. Rochester, N. Y.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

PUBLISHING AGENTS IN
NEW-YORK—M. H. Newman & Co., 199 Broadway;
BOSTON—Joseph Breck & Co., 52 North-Market-Street;
Of whom single numbers, or complete sets of the back volumes can always be obtained.

☞ Advertisements inserted in the Cultivator, at the rate of $1 per 100 words, for each insertion.

THE CULTIVATOR.

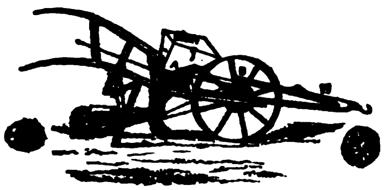
NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, NOVEMBER, 1848. No. 11.

IMPLEMENTS AT THE LATE STATE FAIR.

The exhibition of implements at the State Fair at Buffalo was, in respect to its extent and the general value of the articles, the best we have ever seen. There were many implements which appear likely to become useful, that have not hitherto been extensively known, and a brief notice of some which came under our observation, may be interesting.

SEED-SOWERS OR DRILLS.—The introduction of these implements among the farmers of this country, is comparatively recent. In England, they have been known for many years, and their use has been constantly extending, till it is now considered a maxim there, that "the drill is the sheet-anchor of wheat husbandry." We see no reason why the system of drilling wheat or ther grain, may not be attended with equal advantaes here as in Europe—in fact, so far as it has been ried, we think its utility has been demonstrated. Drills f English and Scotch manufacture have been imported, nd several have been made here by our own mechancs; and we understand that farmers who have tried oth, are inclined to give the preference to those of ' home manufacture," on account of their simplicity nd cheapness, while they are equally as efficient and recise in their operations. Of those exhibited at Bufalo, we noticed Sherman's, of which a cut and description will be found in another place—and Pennock's, ofered by the same person; Palmer's offered by FITCH, ARRY & Co., Brockport, N. Y.; Graggs & Reynold's, ffered by O. REYNOLDS, Webster, Monroe county, N



Emery's Drill Barrow.

A drill, adapted to sowing all kinds of seeds, by nd or horse-power, was shown by H. L. EMERY, Alny. Of this we have previously given a description. ee vol. for 1847, p. 121.)

HORSE POWERS.—Horse-powers of various kinds e used for threshing grain, and for various other purses. They are differently constructed according to e amount of force to be applied. Where only the rength of one or two horses is required, and especialwhere a portable power is wanted, some of these, *operly made*, on the "endless-chain" principle, have veral advantages. Where it becomes necessary to ply several horses, a sweep or lever power is essenl, in order to make the proper attachment. Of the former kind exhibited at Buffalo, we noticed Wheeler's, calculated for either one horse or two horses, offered by H. L. EMERY, Albany. It has been described in our columns, and is well known. Of sweep powers, we noticed Hall's, offered by J. HALL, Rochester; Pitts', offered by J. A. PITTS, Rochester. These seem to be well constructed, and are, we understand, much used in Western New-York. We have heretofore given a description of Mr. HALL's, (see vol. for 1844, p. 344.) Taplin's power was offered by EDDY & Co., Union Village, Washington county, N. Y. This was described in our volume for 1844, p. 377.

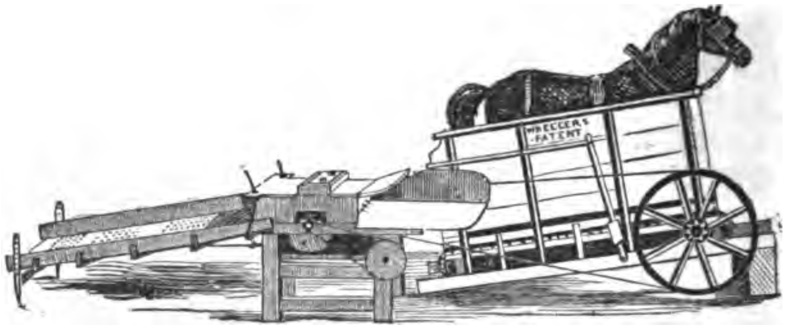
CULTIVATORS.—In the construction and use of these implements, a great improvement has been made within a few years. The principal advantage to which we allude, consists in adapting them to the working of fallows. After a sod has been plowed, the cultivator is capable of penetrating the ground to a sufficient depth to eradicate weeds, and prepare the soil for wheat; and it is made of such dimensions that a much greater breadth can be worked in the same time, than could be done by the same team with a plow. For spring crops, also, land which is not too heavy, that had been broken up the previous fall, can be readily and cheaply brought into a good condition for planting by the use of a cultivator, of the right construction. Cast-iron, which has hitherto been frequently used for the teeth, is found to get too dull to cut the roots of weeds and stir the soil thoroughly. The teeth are now made of cast steel, of any size or shape desired, and being brought to a good edge at first, continue to keep so for some time.

Cultivators for working fallows are sometimes made with wheels, and are so contrived that by means of a lever or other apparatus, the frame work and teeth can be easily raised or lowered, so as to adjust the working of the implement to any required depth.

Of *large* cultivators at Buffalo, we noticed IDE's (of which a cut and description will be found in our vol. for 1847, p. 285;) Hinkston's offered by D. HINKSTON, Clarkson, Monroe county, and one offered by E. R. DIX, of Vernon, Oneida county.

Of cultivators for hoed crops, we noticed several kinds. One by H. L. EMERY, with cast-steel teeth, of good shape—expanding frame, with wheel in front—appeared likely to do good execution. There were other kinds which were not without merits, offered by E. J. BURRALL, Geneva, and WM. ADAMS, Middleport.

PLOWS.—There was a numerous display of these, though but few which differed essentially from those exhibited at previous exhibitions. H. L. EMERY presented seven of different patterns, (including the "Worcester Eagle" plow,) a side-hill plow, and several



Wheeler's Horse Power and Threshing Machine.

subsoil plows. Different kinds were also presented by Starbuck & Son, Troy, Rapalje & Briggs Rochester, E. J. Burrall, Geneva; and H. Delano, Mottville. Eddy & Co., Union Village, Washington county, presented a plow with wrought-iron beam; J. H. Culp, Drummondville, Canada West, presented several kinds of the Scotch plow, for heavy soil, and also the "Improved Canada plow," for light soil.

Stave Machine.—An article under this head, which appeared to be very useful, was offered by Isaac Doolittle, of Rochester. It would make handsome staves from any kind of stuff, and at a very rapid rate.

Corn-shellers.—In a country where Indian corn constitutes the most important staple of production, the most ready and expeditious way of preparing it for market should be adopted. Machines for this purpose, worked both by hand and horse power are in use. Of the former, Clinton's, is well known, and operates well—being capable of shelling, with two hands, 100 bushels per day; it was offered at Buffalo, by H. L. Emery. A. H. Stevens, Geneva, presented a sheller calculated for shelling and cleaning the corn at the same operation. It appeared to operate well.

Of large machines, to be worked by horse or water-power, Smith's, described in the *Cultivator* for 1844, p. 381, is very expeditious in its operation.

Hay and Manure Forks.—The contrast between implements of this kind in use thirty years since, and the best made at the present day, is very great, and exhibits a striking improvement. It may be safely assumed that a man will accomplish a third more work in a given time, with one of our modern, light, spring-steel forks, than could have been done with the old clumsy articles used by our fathers. It is probable that the improvement in this article is attributable, in a greater degree to Henry Partridge, of Massachusetts, than to any other man.

Harvesting Machines.—The trials which have been made with various machines for cutting grain, have, we think, demonstrated the practicability of their success. They will, undoubtedly, be still further simplified and improved, and we confidently anticipate their being brought into extensive use on smooth lands, in the course of a few years. We are not prepared to decide which of the different kinds should have the preference. Hussey's, manufactured by O. Hussey, Baltimore, Md., has been more generally used than any with which we are acquainted, and we believe has worked very satisfactorily. McCormick's, seems also to have succeeded. Esterly's, described in the *Cultivator* for 1845, p. 25, is said to have lately undergone considerable improvement, and we have noticed very favorable recommendations of it in some of the western papers. We saw only Hussey's at the State show.

Mowing Machine.—The only article of this kind of which we have any knowledge, is that made by W. F. Ketchum, Buffalo. It was tried at the late show, and made very good work in second-crop clover. We are told by those who have tried it, that it performs well on a smooth surface, and where there is not fine thick grass at the bottom; but is liable to clog except in straight grass, like timothy, &c. The machine is simple and strong, and we hope will yet be made to answer the purpose effectually.

Fanning Mills—There has been a large competition in the manufacture of these articles for several years, and the consequenee is, that several have been brought very near to perfection. Grant's, and Myers & Bryan's, were the only ones we saw at Buffalo.

Churns.—Yankee ingenuity has been made no less conspicuous in the great variety of *patent* churns it has produced, than in bee-hives and washing-machines. It must be admitted, however, that for doing a large business, some improvement on the old-fashioned dash churn has been effected. At Buffalo, we noticed Kendalls', and the "Thermometer churn,"—both offered by H. L. Emery, and the Atmospheric churn, offered by Peter Fraer, Lewiston. All these seem to be good implements for the purpose they are designed for.

Cheese-presses.—There are many cheese-presses of comparatively late introduction, and, as with other articles, there is a diversity of opinion in regard to their relative advantages. The "self-acting press," Collins & Stone's patent; Dix's "Anti-friction press, and a press offered by W. G. Brainerd, of Rome, were exhibited at Buffalo. The latter article, which operated by a lever and ratchet wheel, seemed to receive much commendation from those who examined it.

Straw and Corn-Stalk Cutters.—A distinction has latterly been made by several societies, in offering their premiums, between machines for cutting straw and those for cutting corn-stalks. Circular cutters, or those in which the knives are placed in the form of a cylinder, which is turned by a crank, and cutting by the edges of the knives being brought in contact with rollers made of hides, lead, paper, &c., are much more expeditious in their operation, and perform more work in proportion to the force applied than any other kind we have known; and for cutting straw and hay, we think they are generally preferred by persons acquainted with the different kinds. But for corn-stalks, which it is desirable to cut and *mash fine*, we should prefer a machine operating differently. Of the circular kind, Hovey's, Steven's, and Ruggles, Nourse & Mason's, were presented at Buffalo. Of other kinds, we noticed Catchpole's, and Richardson's.

Portable Mills.—There are many situations where these mills can be used advantageously. On large farms they may be worked by horse-power. We noticed Fitzgerald's, offered by C. Ross, (which has been before spoken of in our columns,) and one offered by E. T. Butler, Norfolk, Ct.

Sheep and cattle should be sheltered from storms during the month of November. Milch cows should be fed with a little hay on frosty mornings.

LITCHFIELD AGRICULTURAL SOCIETY.

The exhibition of this Society for the present year, at which we had the pleasure of being present, was held at Litchfield, Ct., on the 27th and 28th of Sept. In the aggregate, the exhibition afforded undoubted and gratifying evidence that a general improvement is progressing in the husbandry of the county. We believe this was the tenth anniversary of the society, and the display was considered equal to any former one. In one of the most important departments, working oxen and steers, the show was larger than on any former occasion. There were about one hundred yoke. Their general appearance was better than that of the cattle usually exhibited at the shows we have attended. They were mostly of medium size, nearly all of a red color—a great proportion of them mixed more or less with the Devon blood. The best working oxen are here, a very profitable description of stock, as they not unfrequently bring $150 per yoke.

The Devons were introduced to this county by Lemuel Hurlbut, Esq., in 1819, and seem destined to become here the leading stock. At present, the full bloods are in comparatively few hands; but the crosses of various grades are numerous. Few or none of the former have as yet been tried here for work. The only question in regard to their fitness for this purpose is, that they may not be quite large enough for the heaviest work, or to command the highest prices. We think this point requires some attention, and that the stock should be selected and bred with a view to obtaining the requisite size. Attention should also be given to their dairy qualities. If they are properly chosen in the first instance, and are carefully bred and reared, we are inclined to think, from what we have seen of the breed, that they will be found well suited to the climate and soil, and general purposes of this district.

Judging from the cattle exhibited at Litchfield, we should conclude that the important quality technically called *handling*, had not received much attention from the breeders. We regretted to find that the hides of a large proportion of the stock were rigid and unelastic, and instead of a soft *mossy* coat, were covered with straight, stiff hair, shining like bristles. The hard skins and hard quality of flesh to which we allude, have perhaps in some instances been the result of too much attention to a particular color, without due regard to the properties which constitute the real value of animals. The *touch* is the best indication of the thrift and quality of flesh, and at the same time it certainly does not lessen the capacity of the animal for labor or for the dairy. In examining the oxen exhibited on this occasion, it was found that the best for work, were almost invariably the best handlers, and we are confident that attention to this quality would result in increasing the general value of the stock.

The working oxen were tried with a stone-boat or drag, heavily loaded. This, though perhaps, a fair test of the muscular power of cattle accustomed to pull in this way, does not afford so good a criterion of their discipline, and aptitude for ordinary labor as a trial on a loaded cart or wagon, at a hill.

There were many oxen tried on this occasion, several of which exhibited surprising strength and ambition. Of those we had the opportunity of seeing, we noticed particularly the pairs owned by Moses Lyman, of Goshen, L. Hurlbut of Winchester, J. N. Blakeslee and Philo Hard, of Watertown. Mr. H.'s were smaller than the others, but of handsome form, quick and sprightly action, and when brought to the task, displayed a degree of intelligence, courage and power, that would have been creditable to the proudest courser. There were undoubtedly others deserving of notice, which we did not see tried.

Premiums were offered for the best *lots* of cattle, not less than ten in number, and there were several competitors under this head. Mr. Hurlbut of Winchester, showed twenty-nine head, twenty-six of which were full blood Devons, all except one or two bred by himself. He had twelve cows which would have compared favorably with any Devons we have ever seen at any show. His young stock were good, and several of them superior. His bull *Bloomfield*, five years old, weighing 1700 lbs. in only fair condition, is a capital animal—fine and blood-like in his points, and a nice handler.

Loren Thrall, of Torrington, showed thirty-six head, including three yoke of oxen. He had fourteen cows of various ages, some nearly full blood Devons, of good form, and many of them of good appearance for the dairy.

Mrs. Vesta Hawkins, of Watertown, showed sixteen head of cattle—ten of which were oxen and steers. The lot made a creditable appearance.

Mr. Griswold, of Torrington, showed a lot of very good cattle—the number we did not learn.

Of *milch cows*, we noticed two very superior ones belonging to the President of the Society, Moses Lyman, Esq., of Goshen. One of these we understood, was a full blood Short-horn, and the other a mixture of that breed. Few cows that we meet with anywhere, show better points for the dairy than these. Gen. F. Buel, of Litchfield, showed a "native" cow, remarkable for her yield of milk. He stated that her milk was weighed from the 21st of June to the 21st of August, and that it ranged from 33 to 44 pounds per day during that period—her feed, ordinary pasture. We noticed, also, two very fine looking cows, offered by John G. Gillet.

There were but few animals exhibited as *fat* cattle. We noticed a pair offered by R. I. Canfield, of New-Milford. They were bred in Monroe county, N. Y.; were four years old—weight 4,600 pounds. Their blood appears to be a mixture of Durham. Both are good, but one of them, for quality and ripeness, is seldom equalled by any of that age.

The show of horses was not large. The only stallions we noticed were *Timoleon*, owned by J. H. Tuttle, of Torringford—bred by Mr. Satterthwait, of Morristown, Belmont county, Ohio; and *Membrino*, owned by L. Thrall, of Torrington—bred by Mr. Burton, of Washington, Duchess county, N. Y. These were horses of good figure.

The sheep were less numerous than we expected from the number and high standing of the flocks of this county. There were some good Merinos offered by L. Thrall, and Stephen and George Atwood, of Watertown; and some fair Saxons by Mr. Griswold, of Torrington. N. B. Smith, of Woodbury, showed a few good South Downs.

The swine were few in number, but mostly of good appearance.

The plowing match, we must in candor say, was the least interesting part of the exhibition. The soil was light, inclining in some places to gravel, but mostly free from stones that would offer any hindrance to the plow; but with one or two exceptions the work was not done in a manner that would have satisfied a good farmer. The furrows were baulked, broken, in some places left flat, in others edgewise, and in others with the grass side up. This resulted from two causes; 1, the shortness and unsteady motion of most of the plows, and 2, from the work being done in a great hurry. It is worse than useless to plow faster than it can be well done; and we see no advantage in attempting any greater speed than could be kept up by the teams in a day's work. The object is to ascertain some actual improvement, not to excite astonishment at something which cannot be reduced to profitable practice.

The short plows here used, may answer a good purpose among rocks, and in rough and uneven ground; but are unfitted for such a soil as they put in on this occasion. Hence we see the necessity of adapting implements to their proper situations and purposes.

The exhibition of horticultural and dairy products, manufactured goods. &c., was respectable. The county has long been famous for the fine quality of its cheese, and its reputation did not suffer from the lots here exhibited. The competition in butter was considerable, and several of the parcels we examined were of a quality equal to any we have met with. The articles in this department being only designated by numbers, we had no means of learning the names of the exhibitors; but were informed that the cheese which was deemed the best, was offered by H. M. **Hart**, of West Cornwall, and that the best lot of butter was offered by J. C. **Ambler**, of Bethlem.

The annual address was delivered by Rev. Mr. **Harrison**, of Bethlem. It was a judicious discourse, containing many useful ideas and wholesome remarks.

Notices of some of the farms of Litchfield county will be given in our next.

HYDROPHOBIA.

Of all the diseases to which the animal creation is liable, there is none, perhaps, so horrible in its manifestations as that called *rabies*—commonly known as hydrophobia. The latter term, however, seems to be in some degree inappropriate, inasmuch as a dread of water is by no means a universal accompaniment of the disease.

Youatt, in his treatise on "*The Dog*," has given the pathology of rabies in a more detailed form than any other author; and as the disease is one of which there is always more or less danger, both to our domestic animals and to the human race, it may serve a good purpose to present a brief synopsis of his observations.

In answer to the question, what is the cause of rabies? Mr. Y. says—"It is the saliva of a rabid animal received into a wound or on an abraded surface." Of the nature of the virus he thinks we know but little. "It has not," he says, "been analyzed and it would be difficult to analyze it." It can only be propagated by inoculation—it must be brought in actual contact with the nervous fibre. He is of opinion that it never arises spontaneously, and he thinks if a quarantine of eight months could be established, and every dog confined separately for that length of time, the disease would be completely annihilated.

After the poison of a rabid animal has been communicated to another, it lies dormant for a while—The length of time varying with different animals. In the human subject the disease usually manifests itself in from three weeks to six or seven months; in the dog not less than fourteen days; and generally from five to six weeks—in three months from the time of being bitten, the dog would be considered safe. In man it usually runs its course in twenty-four hours—rarely exceeding seventy-two hours; in the horse it runs three or four days; in the sheep and ox five to seven days; in the dog four to six.

The disease has been communicated, either by the bite of a rabid animal, or by inoculation with the virus, to almost all kinds of animals; and in all it was accompanied by the same or similar characteristics. The strange and uncontrolable disposition to bite is generally manifested. even in rabbits, sheep, and in the human race. By way of experiment, two physicians inoculated fowls with the foam taken from the mouth of a rabid cow; and after about ten weeks, the birds died with evident symptoms of rabies.

Means of prevention.—Excision of the bitten or exposed part has been frequently resorted to, and with various success—the operation is thought to demand great skill, owing to the difficulty of taking out the affected part without bringing the virus in contact with the fresh-cut tissue. Cauterization, (burning the bitten part with a hot iron,) has been practiced with little advantage. The application of caustic—*lunar caustic*—has on the whole proved best. "It is," says Mr. **Youatt**, "perfectly manageable, and being sharpened to a point, may be applied with certainty to every recess and sinuosity of the wound. If the whole of the wound has been exposed to its action, an insoluble compound of animal fibre and the metalic salt is produced, in which the virus is wrapped up, and from which it cannot be separated. In a short time the dead matter sloughs away, and the virus is thrown off with it." He recommends applying the caustic a second time, but more slightly after the eschar has sloughed off, in order to destroy any part that may not have been properly acted on by the first operation.

Mr. **Youatt** states that he was several times bitten by rabid dogs; but that by a timely application of the lunar caustic, he escaped; "and yet often," says he, 'when I have been over-fatigued, or a little out of temper, some of the old sores have itched and throbbed, and actually become red and swollen." He was once bitten in a very dangerous manner by a rabid cat. This animal is generally very ferocious when laboring under rabies, though, fortunately it is but seldom that it is thus affected. During its paroxysms, its rage knows no bounds. In the case alluded to, the cat had been the playmate of the children of the family, but had, all at once, become sullen and ill-tempered. It got into an upper room were it was allowed to remain, and Mr. **Youatt** was sent for. He gives the following thrilling account of the scene which ensued:

"It was nearly dark when I went. I saw the horrible glare of her eyes, but I could not see so much of her as I wished, and I said I would call again in the morning. I found the patient, on the following day, precisely in the same situation and the same attitude, crouched up in a corner and ready to spring. I was very much interested in the case; and as I wanted to study the countenance of this demon, for she looked like one, I was foolishly, inexcusably imprudent. I went on my hands and knees, and brought my face nearly on a level with hers, and gazed on those glaring eyes and that horrible countenance, until I seemed to feel the deathly influence of a spell stealing over me. I was not afraid, but every mental and bodily power seemed in a manner suspended. My countenance, perhaps alarmed her, for she sprang on me, fastened herself on my face, and bit through both my lips. She then darted down stairs, and I believe was never seen again. I always have nitrate of silver in my pocket; even now I am never without it. I washed myself, and applied the caustic with some severity to the wound; and my medical adviser and valued friend furnished still more after I got home. My object was attained, although at somewhat too much cost, for the expression of that brute's countenance will never be forgotten."

Mr. Youatt very severely censures the practice indulged in by many persons, of allowing dogs to lick their hands and face. He says the habit is a very dangerous one, and relates a case of a lady having lost her life by suffering her dog to lick a pimple on her chin. Horses have also taken the disease from dogs licking their muzzles, which were scratched or chafed.

The following extracts from Mr. Youatt's description of the symptoms of rabies, may prove useful in preventing the consequences of this dreadful malady.

"The early symptoms of rabies in the dog, are occasionally very obscure. In the greater number of cases these are sullenness, fidgetiness, and continual shifting of posture. Where I have had opportunity, I have generally found these circumstances in regular succession. For several consecutive hours, perhaps, he retreats to his basket or his bed. He shows no disposition to bite, and he answers the call upon him laggardly. He is curled up, and his face is buried between his paws and his breast. At length he begins to be fidgety. He searches out new resting-places; but he very soon changes them for others. He takes again to his own bed; but he is continually shifting his posture. He begins to gaze strangely about him as he lies on his bed. His countenance is clouded and suspicious. He comes to one and another of the family, and he fixes on them a steadfast gaze, as if he would read their very thoughts. 'I feel strangely ill,' he seems to say: 'have you anything to do with it? or you? or you?'" Has not a dog mind enough for this? If we have observed a rabid dog at the commencement of the disease, we have seen this to the very life.

"A peculiar delirium is an early symptom, and one that will never deceive. A young man was bitten by one of his dogs; I was requested to meet a medical gentleman on the subject. I was a little behind my time; as I entered the room, I found the dog eagerly devouring a pan of sopped bread. 'There is no madness here,' said the gentleman. He had scarcely spoken when the dog quitted the sop, and with a furious bark sprung against the wall as if he would seize some imaginary object that he fancied was there. 'Did you see that?' was my reply. 'What do you think of it?' 'I see nothing in it,' was his retort; 'the dog heard some noise on the other side of the wall.' At my serious urging, however, he consented to excise the part. I procured a poor worthless cur and got him bitten by this dog, and carried the disease from this dog to a third victim: they all became rabid one after another, and there my experiment ended. The serious matter under consideration, perhaps, justified me, in doing as I did.

"This kind of delirium is of frequent occurrence in the human patient. The account given by Dr. Bardsley of one of his patients, is very appropriate to our present purpose:—'I observed that he frequently fixed his eyes with horror and affright on some ideal object, and then with a sudden and violent emotion, buried his head beneath the bed-clothes. The next time I saw him repeat this action, I was induced to inquire into the cause of his terror. He asked whether I had not heard howlings and scratchings. On being answered in the negative, he suddenly threw himself on his knees, extending his arms in a defensive posture, and forcibly threw back his head and body; the muscles of the face were agitated by various spasmodic contractions; his eye-balls glared, and seemed ready to start from their sockets; and at that moment, when crying out in an agonizing tone, 'Do you see that black dog?' his countenance and attitude exhibited the most dreadful picture of complicated horror, distress and rage, that words can describe or imagination paint.'

"There is also in the human being, a peculiarity in this delirium which seems to distinguish it from every other kind of mental aberration. 'The patient,' in Mr. Lawrence's language, 'is pursued by a thousand phantoms that intrude themselves upon his mind; he holds conversation with imaginary persons; he fancies himself surrounded with difficulties, and in the greatest distress. These thoughts seem to pass through his mind with wonderful rapidity, and to keep him in a state of the greatest distress unless he is quickly spoken to, or addressed by his name, and then in a moment the charm is broken; every phantom of imagination disappears, and at once he begins to talk as calmly and connectedly as in perfect health.'

"So it is with the dog, whether he is watching the motes that are floating in the air, or the insects that are annoying him on the walls, or the foes that he fancies are threatening him on every side—one word recalls him in a moment. Dispersed by the magic influence of his master's voice, every object of terror disappears, and he crawls towards him with the same peculiar expressions of attachment that used to characterize him. Then comes a moment's pause—a moment of actual vacuity—the eye slowly closes, the head droops, and he seems as if his fore feet were giving way and he would fall: but he springs up again; every object of terror once more surrounds him—he gazes wildly around—he snaps—he barks, and he rushes to the extent of his chain, prepared to meet his imaginary foe.

"The expression of the countenance of the dog undergoes a considerable change, principally depending on the previous disposition of the animal. If he was naturally of an affectionate disposition, there will be an anxious, inquiring countenance, eloquent beyond the power of resisting its influence. It is made up of strange suppositions as to the nature of the depressions of mind under which he labors, mingled with some passing doubts, and they are but passing, as to the concern which the master has in the affair; but most of all, there is an affectionate and confiding appeal for relief. At the same time we observe some strange fancy, evidently passing through his mind, unalloyed, however, by the slightest portion of ferocity.

"In the countenance of the naturally savage brute, or him that has been trained to be savage, there is, indeed a fearful change; sometimes the conjunctiva is highly injected; at other times it is scarcely affected, but the eyes have an unusually bright and dazzling appearance. They are like two balls of fire, and there is a peculiar transparency of the hyaloid membrane, or injection of that of the retina.

"A very early symptom of rabies in the dog, is an extreme degree of restlessness. Frequently he is wandering about, shifting from corner to corner, or continually rising up and lying down, changing his posture in every possible way, disposing of his bed with his paws, shaking it with his mouth, bringing it to a heap, on which he carefully lays his chest or rather the pit of his stomach, and then rising up and bundling every portion of it out of the kennel. If he is put into a closed basket, he will not be still for an instant, but turn round and round without ceasing. If he is at liberty, he will seem to imagine that something is lost, and he will eagerly search round the room, and particularly every corner of it, with strange violence and indecision.

SUBSOIL PLOWING.

Plowing is one of the most important branches of agriculture—necessary even to its existence. The improvement of practical agriculture, is in proportion to the improvement made in the art of plowing. The principles which chemistry has revealed may be made abortive—their results defective—by improper plowing.

The object to be obtained by plowing, is three fold: 1st, to pulverize the soil; 2d, to expose a great depth of soil to the action of the atmosphere; 3d, to hold the many fertilizing substances brought down by rain and snow, and absorbed by the soil.

It becomes necessary to pulverize the soil, so that the roots of plants may extend in all directions, freely and to a great distance. The atmosphere coming in contact with deep and well pulverized earth, imparts heat and moisture, and, acting upon the soil, assists in liberating its salts and in bringing it into that condition which is best fitted for the growth of crops.

A small proportion of water during rains more or less heavy, sinks into the soil when shallow plowed; such soil is sooner affected by the drouth, and is dry at a greater depth than deep earths, as may be shown by an examination of shallow and deep plowing in a time of drouth. Common plowing does not reach sufficiently deep, to accomplish all that is desired; but deep plowing and its good results are effected by following the common plow with the subsoil plow. It simply loosens the subsoil, and leaves it in that state that roots can enter it, that air can permeate it, and water be absorbed by it. A subsequent plowing, with the common plow, can then easily intermix the surface and subsoil. Plowing may thus be effected sixteen to twenty inches deep.

I have found from frequent examinations of the roots of corn, wheat and oats, during the last four or five years, that they are generally inclined to grow downwards, some of the roots even straight down until they reach the subsoil, then after penetrating an eighth or a fourth of an inch, turn horizontally. I traced a root of a wheat plant which had extended sixteen inches nearly perpendicular, in less than three months after it had been sowed, on ground previously subsoiled. It is interesting to take the spade and examine the roots of crops, at any stage of their growth, in order to compare the effects of common or shallow, with those of subsoil plowing. To see the roots of corn pushing boldly downwards eighteen inches in search of food, eight inches of which has never been penetrated except by the noble oak and hickory, and occasionally by the searching taproot of clover, as I have witnessed this past summer, affords pleasure as well as instruction to the farmer, who takes pride in fat swine or stall-fed oxen.

I subsoiled three-fourths of an acre through the middle of an eight acre lot, in June, 1846, for wheat. The field was plowed but once, and cultivated several times previous to sowing the wheat. I am not able to give the result accurately, in consequence of cutting the grain with a reaper, by which I was unable to keep the wheat separate. The difference was quite perceptible at the time of harvesting; it stood thicker on the ground, and the berry was of a better quality than the adjoining on ground not subsoiled.

In May last, I subsoiled one and a-half acres for corn, in a field containing six acres. It had been a timothy meadow for four years. The soil was clay loam, subsoil a tenacious clay; a part of the subsoiled ground was a swale previously ditched, a part was a ridge, the balance a wet swale, with a compact, impervious subsoil. Twenty loads of unfermented manure was applied to the acre. It was plowed in May five inches deep, and subsoiled nine inches more.

I saw no difference in the corn until August, which was then very perceptible during the drouth of that month. The corn upon the subsoiled part retained all its beautiful freshness, bearing a healthy perpendicular tassel, and having the appearance through the day of having been refreshed with a shower of rain the previous evening. That on the unsubsoiled parts, yielded to the drouth, the tassels drooped and the leaves became dry and rolled. After an examination of the soil and subsoil about this time with the spade, the difference in the parts became no longer a mystery.

The earth was moist on the subsoiled portion, within a fourth of an inch of the surface; on the unsubsoiled, it was dry to the depth of an inch, the balance below dryer than the former. In the one, the subsoil was filled with corn roots in search of food and water; in the other, they were turned aside by the subsoil. The corn on the wet swale was as good, if not better, than any other portion of the field. Judging from the present crop, I am of opinion, that subsoiling this wet swale was an advantage to the crop of one hundred per cent, notwithstanding the objection raised by some, to subsoiling wet land without ditching.

In consequence of an experiment by which I wished to test two varieties of corn, which crossed the field in an opposite direction to that of subsoiling, I only compared three rows of shocks, five rows in each shock, each row of shocks gathered from twenty-one rods of ground. The result was as follows:

No 1. not subsoiled, gave.......... 606 lbs. of ears.
2. 3 rows subsoiled, 2 rows not, 646 " "
3. subsoiled, ... 676 " "

The subsoiled gave at the rate of 73 bushels to the acre; that not subsoiled, 65 bushels per acre; a difference sufficient to pay for subsoiling. I considered the subsoiled part as having been previously inferior for corn. I aimed to be accurate; if there was any difference in the previous condition of the soil, or in estimating the results of the experiment, it was in favor of the unsubsoiled portion. From the observation of the effects of subsoiling, so far as it has been practiced by myself and others, my mind has become settled in the conviction, that subsoil plowing upon most, if not all of the land of this county, will prove very beneficial for corn and all crops usually raised by us.

I may be mistaken, but I fully believe, that subsoiling thoroughly performed, will prove more profitable to farmers for the outlay, than any other one improvement. I have never anticipated much improvement from it, until after one crop of clover. Then I expect a complete preparation of the soil for wheat. It is unnecessary for me to describe, with what ease a clover root will penetrate the loosened subsoil, and even go further in search of food, gaining strength with every additional inch of depth, bringing the salts of the lower strata to the surface for its use, and affording by its decay, when turned under by the plow, rich stores of food for wheat. In conclusion, I would recommend subsoiling in the spring and fall, or when the ground is wet sufficiently deep, at any time in the summer. It does well for a summer fallow, if broken up early. It is beneficial to any crop. The expense is about the same as for breaking up sod ground. And finally, if this short and imperfect essay shall persuade one farmer of this county to practice deep tillage with subsoiling, the object of the writer will be attained. JOHN MALLORY.—*N. Y. State Ag. Society's Trans.*

PHEASANT BREEDS OF FOWLS.

We are aware that some are inclined to doubt whether any of our domestic fowls possess the blood of the true pheasant. It is assumed, as the ground for this doubt, that animals produced by an union of different species, must be barren. It is true that many animals thus produced have not the power of procreation; but we think the conclusion that sterility is the *invariable* result of a mixture of species, is at variance with facts. We know that conflicting opinions have been expressed on this subject, and we shall not at this time attempt an elaborate investigation of it; but will only refer to some testimony and mention some facts having a direct bearing on the question of the union of the blood of the pheasant with the domestic fowl.

Mowbray, and most of the older writers, though they admit the practicability of crossing the two species alluded to, contend that the progeny would be as unproductive as that produced by the horse and ass, or the Canadian and common goose. We have formerly held this opinion ourselves, but have been forced to relinquish it on further evidence and observation.

Another idea entertained in relation to this matter is that hybrids between different species are incapable of breeding among themselves, but may produce a fertile offspring when coupled with either of the parent stocks. This theory is held by the writer of a series of very interesting articles on poultry, with the signature, "D. S. E.," in the English *Agricultural Gazette*. He says, "A cock pheasant with a domestic hen will produce hybrids (or mules) which cannot generate among themselves; but any one of these crossed with one of a different family of pure breed, will often produce a new sort, from which may spring a new improved variety."

We admit it to be a general characteristic of hybrids that they are inclined to sterility, and we think this tendency is more readily overcome when they are bred in the way above indicated; at the same time we do not see that it is by any means impossible that hybrids should sometimes breed among themselves. If we have been correctly informed, such has in several instances been the case with the offspring of the pheasant and some varieties of the domestic fowl. According to the best information to be obtained, the origin of the pheasant or golden top-knot fowl, was a cross of the pheasant and the Hamburgh or spangled top-knot. We have heard of several cases where the stock has been continued among the hybrid progeny; and more than one person has declared that the same has been done with a cross of the pheasant and game fowl.

A writer in the paper before mentioned, noticing the remarks of D. S. E., (from which we have quoted,) says—"pheasants from the woods often breed with common poultry, and produce a beautiful race, which carried forward with the pheasant blood, become smaller indeed, but elegant and graceful. I have just now, a most beautiful creature of this breed. She is the daughter of a cock pheasant and a hen, the produce of a pheasant and a game hen, consequently has three-fourths of the pheasant blood, and one-fourth of game hen. She is spangled all over with bright gold, brown and black feathers; while down her back a few white drops like snow flakes, give her, to my eye, an appearance of high blood, like a white 'ticked' greyhound; her shape is round, plump and elegant, her motions especially graceful." He further describes the cross-bred stock and says—"The cocks are often like a stout red game bird, many with black and gold semi-circular spangles over the breast. One thing ought particularly to be remarked; the comb universally, I think, in these mules (or hybrids,) is, in the hen short; flat and low." The hens of the stock that are three-fourths pheasants are described as being "very like a hen pheasant; the tails, however, always erect;" and in some of the half-breds, the tails of the cocks, instead of being at all horizontal, were "carried quite back like a squirrel's,' so that the head and tail meet at times.

The same writer further observes that he is by no means convinced of the impossibility of carrying forward the breed by the direct cross. From the rarity of the attempts, and from the birds being usually reared in pens, robust fowls, and those totally unconnected in blood, (absolutely requisite) are seldom paired. The only plan to give the breed a fair trial, would be to take a strong, robust cock and hen, the mothers of which should be hardy, well acclimated hens, of quite distinct races—say the Malay, the Dorking, the Spanish, the Polish (spangled) or the game breed, and then cross them under favorable circumstances." He observes, what has been remarked by others, that all the crosses of the pheasant lay well.

The above description of pheasant fowls, corresponds, generally, with the appearance of those bred by Mr. T. C. Abrahams, of West Troy, of which we have spoken on a former occasion. He says that he has bred them of various degrees of pheasant blood, from one-fourth to half, and three-fourths. In some of the three-fourths pheasant hens that he has shown us, the resemblance to the full blood pheasant hen was quite striking. Some of them were entirely destitute of comb and gills, and the head had the round form, the eye the size, fullness and brilliancy characteristic of the pheasant. They had, also, much of the pheasant form and motion, and in some instances there was a similarity of plumage. In this last particular, however, they did not so generally exhibit the traits of the pheasant as might have been expected. Some of the cocks also presented strong marks of the pheasant; though, as remarked in regard to the hens, less in color and arrangement of the plumage than in their other characters. They had the broad full breast, almost naked head, with but little comb or gills, clear eye and quick motion, with a restless habit, and a disposition to take wing on the least excitement; and when engaged in combat, were disposed to rise above their antagonist and strike down upon him.

The infusion of pheasant blood tends to improve the texture and flavor of the flesh of the domestic fowl—especially the coarser varieties of the latter. The author of "*Farming for Ladies*," observes in regard to these cross-bred fowls—"Their flesh has so much of the game flavor, coupled with the juice of the fowl, as to be greatly admired by connoisseurs in good eating."

We presume that crosses of the pheasant might be readily obtained with any variety of domestic hens, by rearing the male pheasants with the females of the former—keeping them together from the time they are hatched.

Show of Animals by the New York State Agricultural Society, and by the Highland Society of Scotland.—The number of cattle at the late show at Buffalo, was 360—of horses 150—sheep 597—swine 50—poultry 250. At the late show of the Highland Society at Edinburgh, the number of cattle was 352—horses 141—sheep 764—swine 58—poultry 130. There were 92 exhibitors of implements.

EXHIBITIONS OF COUNTY AGRICULTURAL SOCIETIES.

Oneida County, N. Y.—The exhibition took place at Clinton, on the 27th and 28th of Sept., and is spoken of as superior to any former one. The number of people in attendance is rated from 8,000 to 10,000. Every department was filled—the competition being unusually extensive. The county of Oneida is becoming distinguished for its enterprise and improvements, not only in agriculture, but in horticulture, manufactories, and in all objects which tend to develope the internal resources and wealth of the county.

Worcester County, Mass.—The meeting of this Society, held on the 27th September, is called by the *Plowman*, "a glorious meeting," embracing "greater numbers than ever assembled there before on a like occasion." The cattle were numerous, and "all looked well." The horticultural department, as usual, full and excellent. Ex-Governor Lincoln gave an interesting statement in regard to the origin and progress of the society. It is now thirty years since its commencement. "He said a few patriotic gentlemen of Worcester, six or seven in number, held a meeting, and immediately subscribed the sum of three thousand dollars. This sum entitled the society to receive from the State the highest sum granted; that is, six hundred dollars per annum. This three thousand was subscribed with the understanding that as the stock of the company, at five dollars for each subscription, should be paid in, the money should be applied to the cancelling of the notes given for the three thousand dollars; and he stated that within one year subscribers enough were found to pay up the whole. 'So much for the agricultural spirit and liberality of the farmers of Worcester county."

Essex County, Mass.—This old society held its show for this year at Lynn, on the 28th September. The number of people in attendance was said to have been greater than at any former show. "A vast concourse of people," (says the *Plowman*,) "honored the festival here. It has become a holiday for all classes of people, from the laborer by the day to the laborer by the season—from the manufacturer of shoes to the maker of laws." Several distinguished gentlemen, legislators and others, were present, among whom was Mr. Webster, who made a stirring speech on the general subject of agriculture and its associated arts. The show is represented to have been excellent in every department. There were 29 competitors at the plowing match, and the work was done "in the best style, nothing could excel it."

Middlesex County, Mass.—Show at Concord, on the 4th of October. Owing to unfavorable weather the attendance was less than usual. There were 27 competitors at the plowing match, and the fields, containing an eighth of an acre each, were plowed in 30 minutes, and the work is said to have been done in a perfect manner.

Jefferson County, N. Y.—Show at Watertown, September 28. The exhibitition was in all respects good—the competition in most departments large and spirited—and the prospects of the society flattering.

Onondaga County, N. Y.—Show and Fair at Syracuse, Oct. 4th and 5th. The weather was rather unfavorable, but notwithstanding this, the attendance is said to have been larger than ever before, and the show generally (says the *Standard*) gave evidence of a growing interest in agriculture.

Monroe County, N. Y.—Show and Fair at Rochester, October 4th and 5th. The *American* says "the exhibition generally was superior to any preceding for several years. There was a large show of stock, implements, fruits, vegetables, &c."

Berkshire County, Mass.—Show and Fair at Pittsfield, October 4th and 5th. The unfavorable weather on the day preceding the show, somewhat prevented the arrival of stock from a distance, but yet the display is said to have been but little inferior in numbers or quality to any previous year, and the show of manufactures was equal to that of any former occasion. The address, by Prof. Norton, was received with great satisfaction.

Housatonic, Mass.—This society is organised within the limits of Berkshire county, and has for several years held its exhibition at Great Barrington. It is a spirited association, and has done much good in the region of its location. Its show this year was on the 27th of September, and from the reports of the several committees, we presume it was fully equal to those which have preceded it.

Chittenden County, Vt.—Show at Burlington, September 27th. The display in general, though hardly equal to that of last year is spoken of as "highly creditable to all parties."

Dutchess County, N. Y.—Annual Show and Fair held in the town of Washington, October 5th. The unfavorable weather for several days previous, tended to keep many people at home; but the show was, notwithstanding, a good one. The *Journal and Eagle* says it was the "best, with the exception of implements and plowers, ever held in the county. The display of stock was splendid, horses especially, and so large was the number of fine sheep that an extra committee was found necessary to examine into their merits. In agricultural productions, fruits, and domestic manufactures, there were fine collections, and a vast concourse of people, including a great many ladies, attended."

Windham County, Vt.—Show and Fair at Fayetteville, first week in October. Owing to a [illegible] storm on the day preceding, the exhibition did not come up to that of last year. But the animals and articles were creditable, and there was much to interest the farmer.

Rutland County, Vt.—Fair at Rutland, September 27th and 28th. From the account given by the Secretary, in the Rutland *Herald*, we infer that the exhibition was equal to those of former years. The list of premiums paid, make a creditable appearance.

Columbia County, N. Y.—Show and Fair at Hudson, October 11th. The attendance was unusually large, more so than at any previous fair. The display, though good, was hardly equal to that of last year. The horses were much better than on any previous occasion. The show of fancy articles was not so good as usual.

Hartford County, Ct.—Exhibition at Hartford, October 11th and 12th. The in-door department is said to have been less crowded this year than in some former years. Though there was an inferiority in some articles, the superiority of others was evident. The display of fruit, especially pears, is spoken of as indicating increased attention to this branch.

Hampshire and Franklin Counties, Mass.—Exhibition at Northampton, October 11th and 12th. The assemblage of people was unusually large, and the show, with the exception of cattle, was good.

MAN[illegible] OF SHEEP IN HUNGARY.

In 1845, Mr. CHAS. S. [illegible] officer in the United States P[illegible]rious countries of Europe, [illegible] the agriculture, and other branc[illegible] particularly noticed the mode [illegible] fine wooled sheep as prac[illegible] Germany, Austria, Hunga[illegible] his inquiries and observations is [illegible] of Commissioner of Paten[illegible] braces much information [illegible] able to farmers an[illegible] The production of fine w[illegible]arried with greater success [illegible] in any other part of the [illegible] system there [illegible] advantageously [illegible] the mode of fee[illegible] of Alcsuth, in H[illegible]

Successful bree[illegible] depen[illegible] upon a s[illegible] quali[illegible] its [illegible] its au[illegible] tively [illegible] followe[illegible] teresting [illegible] at Alcsu[illegible]

JANUAR[illegible] one pound o[illegible] watering; at [illegible] second quality; at [illegible] at 3, [illegible]

[illegible] ewes, [illegible] three-quar[illegible]; and in [illegible] half th[illegible]

(m[illegible] ounces of s[illegible] 10 o'clock [illegible] potatoes, and there[illegible] ley straw each; at 12 M., [illegible] esparsette; at 3 P. M., watering; and in th[illegible] to 100 head, 3 sheaves of oats.

Old wethers receive three-quarters of a pound of carrots; at 9 o'clock watering; at 10 o'clock to 100 head, [illegible]e and a half metzen of potatoes, and thereafter straw; [illegible]t 12 M., three-quarters of a pound of hay, second quality; at 3 watering; and in the evening to 100 head four [illegible]heaves of oats.

[illegible]d wethers and barren ewes receive in the morning [illegible]ee-qua[illegible]rs of a pound of steamed chaff; at 9 o'cl'k [illegible]atering[illegible] at 10 o'clock, to 100 head, one and a half me[illegible] pota[illegible]es, thereafter straw in the yard; at 1 [illegible]ree-[illegible]arters of a pound of esparsette; at 3 [illegible]g; [illegible] in the e[illegible]ening again three-quarters of a [illegible]ed ch[illegible].

[illegible]old, receive in the morning half a [illegible] three-ei[illegible]s metzen of oats and [illegible] to 100 [illegible]; at 9 watering; at 10 [illegible]d, [illegible]en of potatoes, and there[illegible]ree-qua[illegible]ers of a pound of [illegible] qual[illegible] at 3 watering, and [illegible] to 100 head.

[illegible]g, [illegible]ve in the morn[illegible] mingled; at 10 [illegible]lity; at 1 P. M., [illegible]ck, [illegible]ering; and [illegible]reshed, and [illegible] to 100 head. [illegible] in the morn[illegible] watering; at [illegible] a pound; at 1 [illegible] evening to 100 head [illegible] twenty [illegible] in [illegible] half [illegible] straw [illegible] of [illegible] head, [illegible]e sheaves [illegible] straw.

Such [illegible] treated on [illegible] only [illegible] in [illegible] watering is [illegible]ato food at 9, and th[illegible] in every other respect the [illegible]rved.

[illegible] old wethers and ewes. The [illegible] as in January, except that in the [illegible] watering is at 8, and the potato feeding at [illegible] the morning. The straw given after the p[illegible]s during this month is offered in the yard.

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* A metzen is equal to one and three quarters of a bushel En[illegible]

MARCH.—Rams for coupling. Only the hour of watering is changed from 3 to 4 o'clock, P. M.

Rams for sale. Those of the first class have the watering in the afternoon at 3 o'clock, and those of the second have it in morning at 8, and in the afternoon at 4 o'clock. In every other respect the order of February is retained.

Sucking ewes of the first class, get in the morning one pound of esparsette, while in every other respect the old order is retained.

Sucking ewes of the second class, get in the morning three-quarters of a pound of hay, second quality; watering at 8; at 9, one metzen of potatoes to 100 head; thereafter straw in the yard; at 10 o'clock, half pound of chaff mixed with three-eighths of a measure of oats, and five ounces of salt to 100 head; at 3 P. M., watering; at 4 o'clock, to 100 head, one measure of potatoes, and in the evening five sheaves of oats.

Barren ewes and such as are two years old, are treated on the same footing as before, except that the watering is to be at 8 o'clock in the morning, and the potato feed at 9.

Old wethers receive in the morning five quarters of a pound of after-math, (rowen;) at 9 o'clock, watering; at 10 o'clock, potatoes, one and a half metzen to 100 head, and thereafter, straw in the yard; at 1 P. M. three-quarters of a pound of esparsette; at 4 o'clock, watering; in the evening four sheaves of oats to 100 head, and those that are weak get a pound of carrots instead of oat-straw.

Wethers two years old are fed precisely as in February.

Ewes two years old receive the esparsette at 1 o'clk, and their hour of watering is 4 o'clock; otherwise the old order remains.

Lambs receive in the morning half a pound of hay, first quality; at 9 o'clock, watering in the stall; at half past 10 o'clock, to 100 head, five metzen of oats; at 10 o'clock, lucerne half pound; at 1 o'clock, P. M. the same; at 3 P. M., watering; at half past 4, again three metzen of oats to 100 head, and in the evening half a pound of oats and vetches mingled.

APRIL.—Rams for coupling receive in the morning one pound of esparsette, have drink at 8 o'clock, then straw; again, at 11 o'clock, half a pound of hay, first quality; at 3 o'clock the same; at 4, drink; at 6 o'clock five sheaves of oats half threshed and twenty pounds summer-straw to pick to 100 head.

Rams for sale, on the whole are treated alike, yet in the evening at half past 5 o'clock six sheaves of oats are given to 100 head.

Old ewes, every morning receive half pound of chaff, with three-eighths metzen of oats and five ounces of salt to 100 head; at 8, drink; at 9 to 100 head, one metzen of potatoes, and after, straw in the yard, at 12 o'clock, three-quarters of a pound of hay, second quality; at 3, drink, then again straw in the yard, and last, at half past 6 o'clock three sheaves of oats.

Old wethers receive in the morning three-quarters of a metzen of steamed chaff at 8 o'clock; at 9 o'clock, half a metzen of potatoes to 100 head, and then straw in the yard; at 10 o'clock, three-quarters of a pound of esparsette; at half past 4, drink, and after, again straw in the yard: at six in the evening, half a pound of steamed chaff.

Lambs get in the morning half a pound of hay of first quality, at 8, drink in the stall; at 9 o'clock, to 100 head, six half metzen of oats; at 11 o'clock, each, half a pound of lucerne; at 12 o'clock, one pound of the same; at 4, drink at the well; at half past 4, again six half metzen of oats to 100 head; and at half past 5 o'clock, half a pound of oats and vetches mixed.

In the month of MAY, feeding in the stall is given up, and pasture commenced. At first, and until the sheep have become perfectly used to the rich green food, they receive, before being driven to pasture, dry winter fodder and drink. The sheep are not driven out until the thaw has dried up, and the shepherd's servant has to drive them to that part of the pasture which is especially assigned, so that the artificial meadows may be spared for a longer time, and, on the other hand, the sheep may continually find sufficient pasture to feed on. Moreover, the nearest pastures belong to the ewes, and the remotest are for the wethers; the lambs remain in the vicinity of the farm, and during the hot hours of noon the sheep are to be in the stall, in case the distance does not exceed one mile. On those pastures which are far distant, there are shelters for the protection and convenience of the animals. The flocks are most carefully protected against rain. In rainy or rough weather the sheep must be fed in the stall, where they remain; in addition to the dry-fodder cut to chaff, some green lucerne is given which, as we take occasion to add, is stored up in airy and cool fodder rooms, and is well spread on boards, in order not to get heated.

And *vice versa*, according as the autumn, and therewith the winter feeding approaches, the portion of dry fodder which the sheep receive before being driven out, is increased from day to day, in order that the animal organism may again become disused to rich food.

In NOVEMBER, feeding in the stall is resumed, and,

Rams for coupling receive in the morning one pound of oats and vetches mingled; at 9 o'clock, watering, then straw in the yard; at 11 esparsette, half a pound; at 1 o'clock, half a pound of hay, second quality; at 3 drink; at 4 P. M. six sheaves of oats and twenty-five pounds of winter straw to 100 head, for picking and strewing.

Rams for sale receive in the morning one pound of esparsette; at 9 o'clock, drink; at 10 o'clock half a pound of oats and vetches mixed; at 1 P. M. half a pound of hay, second quality; at 4 P. M. to 100 head, six sheaves of oats.

Buck lambs receive in the morning three-quarters of a pound of oats and vetches mixed; at 9 o'clock, drink; at 11 o'clock esparsette, half a pound; at 1 P. M. the same, at 4 P. M. to 100 head, four sheaves of oats.

Ewes of the first class get in the morning one pound of esparsette; at 9 drink; at 10 A. M. to 100 head, one metzen of potatoes, then straw; at 1 o'clock, three quarters of a pound of hay, third quality; at 3, drink; in the evening five sheaves of oats.

Ewes of the second class receive in the morning one pound of hay, third quality; at 9 watering; at 10, to 100 head, one metzen of potatoes, then straw in the yard; at 1 o'clock half a pound of chaff, with three-eighths of a metzen of oats, and four ounces of salt to 100 head; at 3 o'clock watering; in the evening, five sheaves of oats.

Ewes for sale receive in the morning one pound of hay, third quality; at 9 watering; at 10 straw in the yard; at 12, chaff, three-fourths of a pound, and with this three-eighths of a metzen of oats and four ounces of salt to 100 head; at 3 o'clock, watering; and in the evening five sheaves of oats.

The two years old ewes and wethers receive in the morning half a pound of chaff, with three-eighths of a metzen of oats and four ounces of salt to 100 head; at 9 drink; at 10 o'clock, half a metzen of potatoes to 100 head, and then straw in the yard; at 1 in the afternoon three-fourths of a pound of esparsette; at 3, watering; and in the evening four sheaves of oats.

Ewe lambs receive in the morning three-fourths of a pound of esparsette; at 9 o'clock, drink; at 10, to 100 head, half a metzen of potatoes, and thereafter oats and vetches mixed; at 10 o'clock, half a pound of hay of the second quality; at 3, drink; at 4 o'clock, three sheaves of oats.

Such lambs as have been born late in the season receive in morning three-fourths of a pound of oats and vetches mixed; at 9, drink; at 10, to 100 head, half a metzen of potatoes; at 11, lucerne, one-fourth of a pound; at 1 P. M., three-fourths of a pound of esparsette; at 3 drink; and at 4 o'clock, three sheaves of oats to 100 head.

Old wethers receive in the morning half a pound of steamed chaff; at 10 drink; from 11 in the morning to 4 P. M., pasture—(if prevented, at 1 o'clock steamed chaff, and at 3 drink;) and in the evening oat-straw.

DECEMBER.—Rams for coupling receive in the morning one pound of oats and vetches mingled; at 9, drink; then straw in the yard; at 11, esparsette half a pound; at 1, hay, second quality, half a pound; at 3, drink; at 4 o'clock six sheaves of oats.

Rams for sale receive in the morning one pound of esparsette; at 9, drink; then straw; at 10, oats and vetches mingled, half a pound; at 1, hay, second quality, half a pound; at 3, drink; at 4 o'clock six sheaves of oats.

Buck lambs receive in the morning three-fourths of a pound of oats and vetches mingled; at 9, drink; at 10 esparsette, three-fourths of a pound; at 1, clover, half a pound; at 3 drink; and at 4 o'clock four sheaves of oats.

Old ewes of the first class receive in the morning one pound of esparsette; at 9 drink; at 10, per 100 head, one metzen of potatoes; then straw; at 1 P. M., three-fourths of a pound of hay, second quality: at 3, drink; at 4 o'clock five sheaves of oats.

Old ewes of the second class receive in the morning one pound hay, second quality; at 9 drink; at 10 o'cl'k one metzen of potatoes to 100 head, and after this straw; at 1 P. M., three-fourths of a pound of chaff, with three-eighths of a metzen of oats and four ounces of salt per 100 head; at 3, drink; and in the evening five sheaves of oats.

Ewes two years old receive in the morning half a pound of chaff, with three-eighths of a metzen of oats and four ounces of salt per 100 head; at 9, drink; at 10 o'clock, three-fourths of a measure of potatoes to 100 head, and then straw in the yard; at 1 P. M., three-fourths of a pound of esparsette; at 3 drink; and at 4 P. M., four sheaves of oats.

The lambs and wethers receive in the morning three-fourths of a pound of esparsette or oats and vetches mingled together; at 9 drink; at 10 o'clock, half a pound of potatoes; at 11 o'clock, one-fourth of a pound of oats and vetches mixed, or of clover; at 1, P. M., half a pound of hay, second quality, or of esparsette; at 3 drink; at 4 P. M. three sheaves of oats, and the older ones four sheaves, to 100 head.

Old wethers and assorted ewes receive in the morning three-fourths of a pound of steamed chaff; at 9, drink; at 10 to 100 head, one metzen of potatoes, and then straw in the yard; at 1, esparsette, three-fourths of a pound, (or hay, third quality;) at 3, drink; at 4, steamed chaff, three-fourths of a pound.

Ewes of delicate health, and those which have produced twins, receive an additional portion at 11 o'clock in the morning, of half a pound of lucerne and a pint of barley-groats. During the time of coupling, those rams that have been put to great fatigue, receive daily from one half to two pints of oats, added to their food. In the season of pasture the flocks get twice a month salt to lick, two pounds and a half being allowed to 100 head; during the winter, however, only once a month, and then all those sheep which get chaff soaked in salt water for food do not share. Of strewing, twenty-five pounds are reckoned for 100 sheep.

Many will doubtless consider this way of feeding as too rich, and as not very economical; yet the principle of abundant food, as observed in *Alcsuth*, cannot be recommended too highly; for experience has shown that between sheep well and those tolerably fed, there is regularly a difference of one-third in regard to the quantity of wool obtained. And then again, it is only by such abundant food that the smallest amount of mortality, as well as the largest increase and that development of their animal organism which gives the sheep, in all periods of its age, the highest capacities of breeding and fattening can be secured.

It is an undeniable fact that the manor of Alcsuth, in spite of many unfavorable circumstances, has been raised from its neglected condition to its present flourishing state, in a very short time, and by comparatively small expenditures, solely by means of breeding of cattle, and more especially a profitable breed of sheep. For now-a-days it is not the sheep of the finest silky and thin wool that give the highest profit to the farmer; but, on the contrary, it is those whose wool unites with the greatest compactness a proper degree of fineness; because the sheep of this class require smaller outlay as regards feeding, and in fact in every other respect; because they give more lambs, are less liable to sickness, and hence to mortality, and because they are better even for fattening; above all, however, because the finest wool very rarely fetches a price proportionate to its cost, in the market. With these leading views the Alcsuth sheep have been bred. This breed had its origin from the celebrated domestic sheep-folds of U. Altenbourg of Urmeny, and was developed into a peculiar and superior race, by the masterly treatment of the breeder. In its exterior, this sheep bears, in a high degree, the character of the *Infantado* race, which, improved and ennobled by proper cross-breeding, as it has been of late, constitutes now the aim of most wool growers.

The Alcsuth sheep is distinguished by its strong-built, vigorous body; its head and neck are thick, its collar having many folds, its body stretched, its back broad and round shaped from the hip bones to the root of the tail; its legs, which are full clothed to the hoof, are rather short than long; its fleece is long, thick, uniformly curled, throughout good, middling fine and uniform.

It is not easy to give the reader an idea or description of the fineness of the wool in words. By the Dolland wool meter, the fineness would be expressed by the quotient of the third class, viz. by 0,0006. Still, to supply those who have no opportunity of seeing the Alcsuth flocks, with a surer standard whereby to judge of the fineness of their wool, a list of prices is subjoined, at which the Alcsuth wool was sold during the years 1838 *to* 1841, and which was as follows, (by the cwt.)

In 1838,	Conv. money, Fl. 145=$72½
" 1839,	158= 79
" 1840 and '41, (when prices were much depressed,)	128= 64

If it is considered that these prices were paid without any allowance for loss in weighing out the wool, and in fact without any kind of deduction whatsoever, no one can fail to perceive that the quality of the wool must be good and suitable to use. What gives the Alcsuth wool a particular value, and renders it so much sought after, is that its evenness is not confined to single heads, but extends over the whole flocks.

Another thing of great moment is the unusual productiveness of wool, as obtained by the Alcsuth sheep; for thickness and length are so well combined in this wool, that its want of fineness can be of no account whatever. The average weight, as ascertained by personal examination, and by reference to the bills and books, is as follows:

With the ram,	3 lbs.
With the wether,	3½ "
With the ewe,	2½ "
With the lamb,	[illegible]

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Pomological Convention at New York.

In accordance with previous notice, this important convention assembled at Clinton Hall, in New-York city, on the morning of the 10th ultimo. Delegates were in attendance from a large number of the States of the Union, including many of the most eminent pomologists of the day. It continued in session for three successive days.

The convention was organised by the appointment of **Marshall P. Wilder**, of Massachusetts, President; and S. B. **Parsons** and P. **Barry** of N. Y., and **Geo. Deacon** of N. J., Secretaries, with a vice-president from each of the states of Massachusetts, Vermont, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Virginia, Ohio and Missouri.

After the reception of credentials, and the appointment of the necessary committees, the convention adjourned till the morning of the 11th. The remainder of the day was chiefly occupied with the arrangement of the numerous collections of fruit brought together on the occasion. These collections occupied tables variously distributed through the hall, all labelled and conspicuously displayed, so as to be at all times accessible to the inspection of the members of the convention.

Among the larger contributers, we noticed the following:—

Massachusetts—Samuel Walker, Roxbury, 60 varieties of pears; B. V. French, Braintree, 73 varieties of apples; J. M. Earle, Worcester, 13 of pears, 10 of apples; M. P. Wilder, Dorchester, 120 of pears; R. Manning, Salem, 110 of pears, 36 of apples, 3 of quince; H. H. Crapo and Jas. Arnold, New Bedford, collections of pears; A. Foote, Berkshire county, apples and pears.

Connecticut—Collections from Dr. Munson, G. Olmsted and others, and 32 varieties of the apple from —— Buell, of Richfield.

New-York—Dr. Valk of Flushing, fine specimens of 12 varieties of grape; Wm. R. Prince & Co., apples, pears and peaches; Charles Hamilton, Canterbury, 21 varieties of apples, three of plums; A. J. Van Slyke, Coxsackie, 19 apples, 9 pears; Ellwanger, Barry and Rowe, Rochester, 44 of apples; B. Hodge, Buffalo, 27 apples, 19 pears; H. W. Sargent, Fishkill, 15 pears, 9 grapes; Thorp and Smith, Syracuse, 27 apples, 4 pears; J. Battey, Clinton Co., 29 of apples; Charles Downing, Newburgh, 21 varieties of apples; D. F. Manice, Hempstead, L. I,, pears, grapes, &c.; W. L. Ferris, Westchester, 12 pears; J. J. Thomas, Macedon, 32 apples, &c.; Jas. H. Watts, of Rochester, also presented fine specimens of Northern Spy; T. A. Smith, of Syracuse, a bushel of large and showy specimens of the Onondaga pear; J. J. Thomas, Macedon, half a peck of fine and fair specimens of White Doyenne pears taken indiscriminately from a tree which bore 12 bushels the present season, and which had stood 20 years in grass ground without manuring.

New Jersey—Thomas Hancock, Burlington, 18 apples, 14 pears, &c., J. Pullen, Hightstown, 22 apples.

Pennsylvania—D. Miller, Carlisle, 22 apples; R. Buist, a fine showy bunch of genuine Tripoli grape &c.

Ohio—F. R. Elliott, Cleveland, 30 apples and several pears; McIntosh & Co., Cleveland, 43 pears, 53 apples.

Besides these, there were many smaller collections from various parts of New England and the middle states, and from Virginia and Kentucky.

During the intervals of the sessions, the delegates in attendance were enabled to inspect numerous collections, but all examinations of quality *by tasting* were made by the Fruit Committee in a separate room. This committee, after much care and thorough deliberation, presented the following select list of fruits, worthy of general cultivation, which was adopted after considering each variety, one by one, by the convention. In preparing the lists, the committee, (which consisted of A. J. Downing, Thomas Hancock, J. J. Thomas, Robt. Buist, Robert Manning, Herman Wendell, Josiah Lovett, L. C. Eaton, and Geo. Gabriel,) rejected every variety against which there were found to be three votes, and none were adopted which had not been widely cultivated:—

Apples—Early Harvest, Large Early Bough, American Summer Pearmain, Gravenstein, Summer Rose, Early Strawberry, Fall Pippin, Rhode Island Greening, Baldwin, Roxbury Russett. *Adapted to particular localities*, Yellow Bellflower, Esopus Spitzenburgh, Newtown Pippin.

Pears—Madeleine, Bloodgood, Tyson, Bartlett, Seckel, Flemish Beauty, Beurre Bosc, Beurre D'Aremburg, Winter Nelis, Golden Beurre of Bilboa. *Adapted to particular localities*,—White Doyenne, Gray Doyenne.

Cherries—Black Eagle, Mayduke, Graffion or Bigarreau, Black Tartarian, Knight's Early Black, Downer's Late, Elton, Downton.

Plums—Jefferson, Washington, Green Gage, Purple Favorite, Coe's Golden Drop, Bleecker's Gage, Frost Gage, Purple Gage. *For particular localities*, Imperial Gage.

Peaches—Grosse Mignonne, Early York, (serrated,) Large Early York, George IV, Oldmixon Free, Cooledge's Favorite, Crawford's Late, Morris White, Bergen's Yellow. *For particular localities*,—Heath Cling.

A committee appointed for the purpose, reported the following resolutions, which were adopted:—

Resolved, 1, That the Convention be designated the American Congress of Fruit Growers, and that the members or substitutes, and officers thereof, be regarded as holding their respective appointments for two sessions.

2. That all Pomological, Horticultural, and Agricultural associations of North America, be invited to send delegates to this Congress.

3. That at the close of the present session of this Congress, it be adjourned to hold its second session in the city of New-York, on the first Tuesday of October, 1849.

The following fruit committees were appointed from the different states:—

Massachusetts—Samuel Walker, F. W. McCondry, P. B. Hovey, J. Lovett, R. Manning, M. P. Wilder.

Connecticut—G. Gabriel, Dr. A. T. Munson, H. W. Terry, George Olmsted, Dr. V. M. Don.

Rhode Island—Lewis C. Eaton, Stephen H. Smith, Alfred Smith, J. Stimson, —— Comstock.

Vermont—R. Mattison, M. Slocum, C. Goodrich, B. F. Fay.

Maine—H. Little, S. L. Goodale.

New-York—A. J. Downing, J. J. Thomas, Dr. H. Wendell, P. Barry, B. Hodge.

New-Jersey—H. W. S. Cleveland, R. S. Field, I. Pullen, T. Hancock, J. W. Hayes, J. S. Chambers.

Pennsylvania—Dr. W. D. Brinckle, E. W. Keyser, Thomas P. James, R. Buist.

Maryland—S. Feast, Wm. Corse, L. N. Rogers.

Dist. Columbia—Joshua Pierce, J. F. Callan, W. Breckenridge.

Ohio—A. McIntosh, A. H. Ernst, Dr. S. P. Hildreth, F. J. Scott, T. S. Humrickhouse.

Indiana—J. D. S. Nelson, D. Ivinhart, —— Scott.

Illinois—Dr. J. H. Kennicott, Jno. Wright, J. Y. Scammon, —— Arnold, Prof. J. W. Turner.

Kentucky—L. Young, Ward Brown, H. Duncan, J. Allen, G. W. Weissenger.

Missouri—Thomas Allen, L. Russell, Jas. Sigerson, Nicholas Reihl, E. Mallenchrodt.

Canada—Dr. C. Beadle, Jas. Dougall.

Pomological Convention at Buffalo.

Continued.

The following decisions were made relative to

APPLES:

The *Yellow Harvest*,—this name being adopted in preference to Early Harvest, as being more descriptive, —worthy of general cultivation.

The *Tart Bough*—three weeks later than Yellow Harvest, which it resembles,—and second rate in value from its lateness.

St. Lawrence—regarded by most as first rate,—by others as not fully so, but to be admired for its size, beauty and vigorous growth.

Dyer, or *Pomme Royal*, known also in some parts of Western New-York by the name of *Hollow Crown*, first rate.

Early Joe—regarded by all as of the highest quality when fresh from the tree. But it was stated by several that it would lose much of its flavor in a day or two, and is therefore unfitted for a distant market.

Early Strawberry—first rate for its season.

Sweet Bough—a first rate sweet summer apple.

Sine Qua Non—first rate.

Toole's Indian Rareripe—first rate for cooking, second rate for the table.

Minister—large and handsome, second rate.

Summer Rose—first rate.

Summer Queen—first rate for cooking, second for the table. A sweet apple, ripening the same time, and known as the *Augustine*, is sometimes erroneously called Summer Queen. The latter was decided to be third rate.

Duchess of Oldenburgh—first rate for cooking, second for table.

Fameuse or Pomme de Neige—voted, but not unanimously, to be first rate, in northern regions especially.

Rhode Island Greening—a first rate standard fruit, both for table and cooking.

Red Astrachan—passed by. It should have been stated to the convention that this variety, although not a good table fruit, possesses great excellence as a very early *cooking* apple, being far superior in this respect to the Yellow Harvest.

Newtown Pippin.—Much discussion took place relative to this celebrated variety. Several delegates regarded it unworthy of cultivation in western New-York, on account of its defective fruit. Others regarded it of the highest value; and facts were stated showing that in instances where it had been invariably poor, its quality had been greatly improved by rich cultivation, and particularly by the application of ashes.

The *Yellow Newtown Pippin* was considered inferior in quality.

A half bushel of the *English Russet* of Downing, was presented to the convention—they were of last year's growth, and were quite fresh, sound and agreeable. As the name English Russett was not considered sufficiently distinctive, it was concluded to call this variety the *Poughkeepsie Russett*, by which it is also known. It was decided to be first rate as a long keeper, and second rate in quality for the table.

Lowell Apple—known also as *Orange*, *Oswego Orange*, *Tallow Apple*, or *Tallow Pippin*, and at Cleveland as *Queen Anne*, and remarkable for its oily surface a few days after it is gathered. Though not fully first rate in quality, it was decided to be worthy of cultivation on account of its large size, fair and handsome appearance, and great productiveness.

Westfield Seek-no-further—first rate.

Vandevere—first rate.

Ribston Pippin—third rate, except in northern regions, where it proves fine.

The *Northern Spy* created much discussion. It was admitted to require good cultivation, and careful pruning, to develope its fine quality—that the Rhode Island Greening, and Roxbury Russett would flourish where the Spy would be nearly worthless—but that, with proper treatment, the latter was a fruit of high excellence.

Twenty Ounce—first rate in size and beauty, second in quality.

Gravenstein—first rate.

Esopus Spitzenburgh—first rate.

Beauty of the West—third rate.

Fall Pippin—first rate in every respect.

Late Strawberry—first rate.

Swaar—first rate in all respects.

Bellmont, *Waxen*, or *Gate*—first rate.

Hawthorndean—unworthy of cultivation.

*Mother Apple**—first rate.

Baldwin—first rate in Massachusetts and New York, unsuccessful in Ohio.

Jonathan—first rate, taking all its qualities into consideration.

Porter—first rate in all localities.

Rambo—first rate, and succeeding equally well in the Eastern and throughout the Western states.

Hubbardston Nonsuch—first rate—only equalled in richness by Swaar, Esopus Spitzenburgh, &c.

Pomme Grise—first rate in the North and in Canada.

Gloria Mundi, or *Monstrous Pippin*—unworthy of cultivation.

Bullock's Pippin, or *American Golden Russet* of Downing, the former name recommended by the convention—worthy of general cultivation.

Jersey Sweet—first rate for its season.

Cornish Gilliflower—unworthy of cultivation.

American Summer Pearmain—first rate.

King of the Pippins—second rate.

Summer Hagloe—distinct from the Hagloe crab—first rate, but not unanimously.

Office of Leaves—Singular Occurrence.

The past season has been unusually favorable to the occurrence of leaf-blight in plums and pears, in many parts of the country. Not only have seedlings been seriously affected, so as to lose nearly all their foliage in midsummer, but large and bearing trees have often become more or less stripped, and, as a well known consequence, the quality of the fruit has greatly suffered.

A singular occurrence, showing that the flavor in maturing, depends wholly on the office of the leaves, was the following:—The crop of a Yellow Gage Plum tree, by means of daily attacks on the curculios, was saved from their punctures, and promised a fine supply. But when the fruit was two-thirds grown, and of course wholly destitute of any good flavor, the leaves all dropped from the tree; not one was left. The branches were perfectly bare, with the exception of the load of plums which half obscured them. The plums remained on the tree, without changing any in size, color, or taste, while others on trees not so affected, were rapidly ripening round them. In two or three weeks, a second crop of leaves appeared, when the fruit immediately commenced a second growth, and attained full size. It subsequently assumed the usual color, and all the richness of flavor of well ripened specimens, and was about one month later than the usual period of maturity.

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* Printed erroneously "*Northern*," in the proceedings of the convention.

Other varieties, affected with leaf-blight, presented similar results, but less striking; and nearly all of them soon after the appearance of the second growth of leaves early in autumn, were also observed with a thin crop of blossoms.

Address of David Thomas,

Before the Buffalo Horticultural Society.

We briefly alluded to this address in our last number. Its merits are of a high order. We regard it as one of the best productions of its distinguished author. With the hope of inducing our readers to procure it, we give a few brief extracts:—

The following remarks on *a taste for flowers*, have much point:—

" Does any animal except man, enjoy the beauty of flowers? I presume not, having never seen any indication of the kind, though hundreds of insects regale on their nectar. Our love of flowers must then be considered as evidence of a higher organization; and those who cannot appreciate it, suffering from the want of some phrenological development, have claims on our sympathy. Yet as organs are said to be enlarged or diminished, according to our moral or mental training, so many of our friends now shut out, may indulge the hope of rising hereafter, to the enjoyment of more glorious objects, and of purer and more elevated pleasures."

The subject of the various shades of color is vividly illustrated:—

" Occasionally we meet with tastes that are partial or averse to particular colors; and this state of mind may arise from impressions perhaps long since forgotten. If we had only seen in early life (as the poet says,)

> 'Where tawdry *yellow* strove with dirty *red*,'

we should doubtless have acquired a distaste for those colors; and probably without perceiving it at the time. That it would be a prejudice however, must be evident when we look at the rainbow or prismastic spectrum—so clear, so free from every tinge or impurity of earth, that we rejoice in the whole seven colors and know not which to prefer.

" Pure white, as we see it in a sunbeam coming through a clean atmosphere, is the blending of all colors in certain definite proportions; and when it is impure, a surplus or deficiency of some color must cause it. The colors of most flowers are mixtures. The purples are rarely, if ever, pure, being only the intermingling of red and blue.—The prismatic colors exhibited in flowers, however, with rare exceptions, are only *six*, for *green* in Botany, like *black* in Optics, is not considered a color.

" The intense blue of some Alpine flowers, has been ascribed to the deep hue of the sky that bends over them; but the constant supply of moisture may be a better reason. Finer colors may have been observed in some species near brooks in summer and autumn, than on similar plants that stood on dry banks above them."

The following facts, of a practical character, cannot fail to be interesting to the cultivator of flowers:—

" The winters of Western New-York, are as favorable to herbaceous perennials as those of Philadelphia—perhaps more so—but they are less favorable to half hardy shrubs. Our heavy loams freeze not half as deep as theirs, owing in part to more clouds at that season—the condensed vapor of our lakes—that obstruct the radiation of heat; and to more snow at the time of our severest cold. Plants that lie snug under this mantle, are as safe as they would be in England; and we need only be apprehensive of danger, immediately after an untimely thaw. With half-hardy shrubs, however, it is different. Over our snows, winds below zero frequently sweep along; and when spring returns, we often find all *above* the snow-line *dead*, and all *below* it *alive*, and in the best condition.

" Bulbous plants from warm climates, that can bear much depth of earth, do well under our northern sky. Perhaps the number, however, is not great, though I know of but few experiments in this line; but *Amaryllis longifolia* from Southern Africa, is quite at home in my border. It has been there 15 or 20 years. It was planted about ten inches deep; and this depth has been increased by turning a sod, or throwing litter over it. It has produced leaves four feet long.

Another bulb—*Pancratium maritimum*—from the sea coast of Southern Europe, after a trial of four years, is now doing well in the open border, among sand and peat. It is not more than six or seven inches below the surface; but then it is in a *sunken* and not in a *raised* border,—a difference in position worthy of particular notice. For the first two years, it was not vigorous; but on sprinkling salt round it at different times, it became healthy; and it is now in the most flourishing condition, having produced two fine umbels of flowers the present season. They are white, star-like and two inches in diameter.

" *Amaryllis belladona*, from the West Indies, has also withstood the last winter under similar circumstances. Owing perhaps to habits contracted in the green-house, it started to grow late in the fall, which was a wrong movement; and accordingly, its leaves were cut down by the frost; but it is growing again."

The construction of a very simple support for *pillar roses*, is thus described:—

" Perhaps the best method of training the tall-growing kinds, is on pillars. Two years ago, I had pieces of scantling, twelve feet in length and three inches by four, planted as posts, first perforating them in five or six places with a two inch auger. Through these holes the stem of the rose is drawn. As it lengthens, this operation should be repeated from time to time, till it reaches the top, about nine feet high; and as it depends on no decaying cord or bandage for support, it cannot be blown down by the wind.

" To insure these posts from decay, inch auger holes near the ground were bored, slanting downwards, not quite through, and filled with salt. Some persons have used plugs in their posts to keep out the rain; but it is best to leave them open for a time, till the wood becomes saturated with brine. As the salt dissolves, more should be supplied—say two or three times a year.

"To obtain a finer display, I have planted roses of different colors on opposite sides of the posts, intertwining their branches. At one, I have the *tea scented Ayrshire* and *Violet Episcopal*, by way of contrast; and at another, the *Baltimore Belle* and *Queen of the Prairies*. I have sixteen posts of this description, and have obtained, expressly for this purpose, a sufficient number of tall-growing kinds. Further experiments are wanted, however, to determine what sorts can be most fitly associated, and what shades of color will harmonize the best."

The following reasons for cultivating a general selection of fruit, are well worthy of consideration:—

" But why do we want so many sorts of fruit? For the same reason that we want so many sorts of food: the pleasure that springs from variety. Another, not less cogent, however, might be given. In proportion to the number of kinds cultivated, are the chances for a supply in unfavorable seasons,—for the frost often destroys one sort, and leaves another; and continued rains induce decay in some, and not in others, especially among plums and cherries. Some fair-skin varieties of the latter, have been almost worthless this year; and some of the black have suffered, while the acid sorts, as the Mayduke and Morello, have generally escaped. Let us, therefore, have many kinds, and if the best sometimes offer nothing, let us have the second best."

We close by quoting the following interesting statement of an experiment, and reminding our readers that what we have here given is only a fair sample of the rest of the address, of which we have given but a very small portion:—

"Last fall, I had many late planted cabbages that formed large tufts of leaves, but not good heads; and I had a hope that if I could preserve them till spring, they might grow into something useful,—so they were set in a trench, very closely, side by side—some straw was thrown on them—and over that about two inches of earth. As the trench was ten or twelve feet in length, two tubes were set in near each end, to let off the bad air—just such as every cabbage depot under ground, or potatoe heap ought to have. In the spring, I was surprised at the result. Every green leaf had disappeared—the larger plants had formed good heads, though not so compact as grew in the open air, and all were beautifully blanched and fit for use."

I. Grape Grafting.

EDS. CULTIVATOR—In your May No., at page 148, you published an experiment of mine in grafting the July Grape upon our common hardy varieties. I have now the satisfaction to state to you that two of these grafts were in flower before they were one year old, and are now actually presenting clusters of fruit.

II. Budding the Hawthorn with Pears.

In 1847, August 24th, I budded about sixty Hawthorns of three or four years of age with pears, chiefly the Beurre de Capiaumont and White Doyenne varieties. The buds nearly all took. But they broke much later and more slowly than those on quinces beside them. One of them is even now, (August 17th,) but just opening. Many of them after opening, remained a long time, a mere rosette of leaves. A few even now remain in this condition, and may not probably advance any farther until next year. But the most of them have made from six to thirty inches of wood, and appear healthful. Many, on first putting out, grew nearly at right angles with the stock for some time. This seems to be occasioned by a greater degree of rigidity in the bark than that exhibited by the quince. This experiment, though appearing very discouraging in the early part of the season, is likely to result well. I need not say that they were budded as near the ground as possible, some even below the ordinary level.

III. Various effects of Winter on Quinces.

In the winter of 1846—7, which was quite open, my quince trees every where suffered very severely, losing much of the wood in the previous year's growth.

During the winter of 1847—8, which was even more open, they suffered hardly at all with the exception of one row, and those my finest trees, which were amply protected by a high Hawthorn hedge. These last were badly injured, some of them being killed, root and branch. This result was occasioned doubtless, by the excitement of the circulation at an untimely period.

IV. Experiment with an Asparagus Bed.

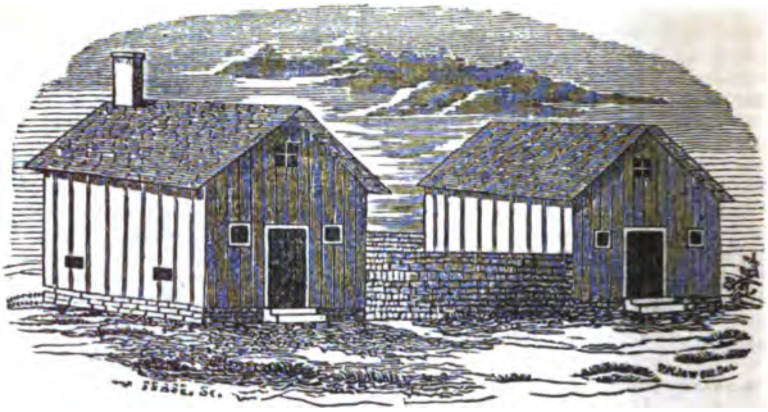
This bed is about four years old, and contains thirty square rods. It was originally put in too superficially, the crowns of the plants coming almost to the surface; nor had the soil been perfectly freed from quack grass. So foul had it become by the 9th of June, of the present year, that it was almost impossible to cut for market. I mowed over the whole bed on that day, cutting down quack, weeds, and young seedling asparagus. I then hoed it as deeply as the superficial character of the bed would permit, pulling out the quack as much as possible and stirring up the manure that had been put on in the spring. The consequence was, the renewal of my bed in its productiveness, while I did not lose more than four or five days' use of it;—"a good operation," as they say.

The Sunflower.

EDS. CULTIVATOR—I am desirous of gaining information in relation to the culture, management, and yield of the sunflower, as also the usual amount of oil that can be expressed from it. If any of your subscribers will furnish the required information, they will much oblige yours, &c. W. I. I. *Canada West, September*, 1848.

MONTREAL AGRICULTURAL SOCIETY.—The *Montreal Herald* gives an interesting account of the exhibition of this Society. A much greater interest is said to have been manifested in the show than on former occasions. The finest part of the show was said to be the horses, of which there was a large number of fine ones. Great improvement was observed in the cattle. The Short-horn bull *Timour*, owned by Mr. HAYS, of Montreal, (bred by Mr. PRENTICE, of Mount Hope,) is very highly spoken of. A bull, a cross of the Ayrshire and Galloway, is said to have attracted great attention. There was a fine display of poultry, chiefly by Mr. HAYS and J. E. GUILBAULT—the latter showing 14 choice varieties of fowls.

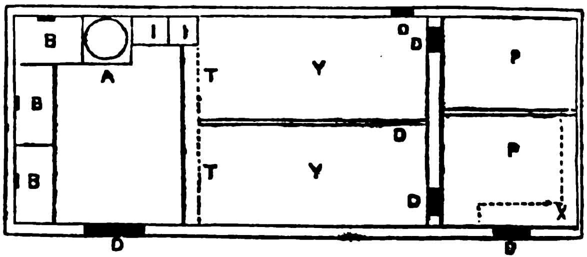
THE PEACOCK.—The natural disposition of the peacock is selfish and gluttonous, and it is only by pampering this weakness that he can be persuaded into obedience and attachment. He is vain, and at the same time ungallant. He is far from manifesting the politeness and attention which the common cock shows towards his mates. The peacock will greedily snatch from the mouth of his hens those titbits and delicate morsels which the cock would either share with his favorites, or yield to them entirely. The peahen, in return, cares less for her lord and master, and is more independent of him when the breeding season is over. She then regards the display of his tail, his puffings and struttings, and all the rattling of his quills, with the coolest indifference. Nor does *he* seem to care about *her* admiration, or to make all this exhibition of his attraction to secure *her* notice, but is content if he can get some astonished hen, or silly, bewildered duck, up a corner, to wonder what all this fuss is about. Like other vain coxcombs, he expects the lady to make the first advances. Although occasionally cruel, the peacock is shy of fighting, particularly when in full plumage; nor do they so frequently engage with each other as with birds of a different species, such as drakes, cocks, &c. One, out of feather, was seen to keep up a three hours' struggle with a musk drake; but had it been in full plumage, it would not have shown fight at all. Their probable term of life is 18 or 20 years. They may be eaten as poults at nine months old. If fatted, they should be shut up together with any turkeys that may have been in the habit of associating with them, and fed exactly the same. If confined alone, they pine.—*Ag. Gazette*.



PLAN OF A PIGGERY.

[The accompanying cut and description of a piggery, which we take from the *Transactions* of the N. Y. State Agricultural Society, received the premium at the January meeting, 1848.]

I forward you my plan of a piggery and other necessary fixtures, which I have in contemplation, and am preparing to put up, on a tasteful and cheap scale, within the reach of every thriving citizen in our State.



Ground Plan.

The cost of construction will depend much on the finish. The ground plan of the two buildings, which includes a yard between them, is 40 ft. long and 14 feet wide, which may cost from fifty to ninety dollars. A good mechanic has promised to do all the labor, after the foundation was laid, for forty dollars, the boards to be planed and matched. Unless the buildings are to be painted, I would recommend that the boards be put on in a rough state, and white washed with a composition of stone lime and water lime. To construct a good cellar would cost about thirty dollars more.

This plan might be enlarged; I have designed it for six fattening hogs, or for one breeding sow and three porkers. "Millionares" may require something more expensive, but this is sufficiently spacious for the common citizens of Vermont. The two upright buildings represent the swill house and the piggery. Both are fourteen feet long and twelve feet wide, the posts ten feet.

The ground plan of the first building contains the arch A, for cooking, where boilers and steamers will be placed sufficiently large to accommodate the number of hogs to be fed. The feeding troughs also, T, T, are included in the same building, which is made of white oak plank, and extends the whole length of the house, except the space occupied by the tubs or vats, I, I, which are convenient for the cooked food, swill, &c. One of them may contain the warm food, the other in a process of fermentation, to be fed at any time. The dots on the yard side of the house and feeding trough, T, T, represent standards of iron or white oak, arranged along and close to the outside of the trough, at suitable distances to allow the heads of the swine to pass between them into the feeding trough. The sill on this side of the house is raised and framed to the posts two feet above the common level of the other sills, and these standards on pins which prevent hogs from getting into the trough or house, are framed into the sill above, and the feeding trough; the plank which forms the bottom of the trough may project on the outer side for that purpose, or the plank may be of such thickness as to enter the upper edge.

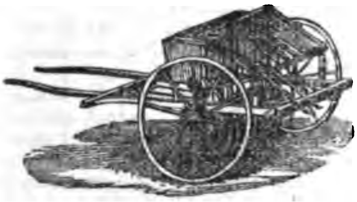
B, B, B, are bins for apples and roots, in each of which a window opens for the purpose of shoveling them in, two of which are seen in the upright part. The hogs are to lodge in the pen, and can pass from their apartments, P, P, through the yards, Y, Y, to the feeding trough, T, T; a partition divides the sty or open yard, and extends across the piggery, forming two sleeping apartments, P, P, and two yards, Y, Y; six doors and passage ways opposite, D, D, D, D, D, D. The main door in the piggery opens into the passage, X, 2½ feet wide, for the convenience of the attendant to carry in straw, &c. The open yards may be used for litter, and to manufacture manure; these occupy space enclosed between the two upright buildings, and are 16 feet long.

The floor of each building and the yard should be flagged with stone or brick, secured from frost. The sills of the two main buildings are raised upon a wall 18 inches. A cellar may be constructed under the first building for the storage of roots; if seven feet deep, will hold 600 bushels, allowing 2420 cubic inches to the bushel. A convenient wheel and windlass is arranged in the loft of this house, for handling the hogs at the time of killing, and may be convenient for dressing other animals.

There are many piggeries in this State constructed about 30 feet long and 20 feet wide, which contain all the cooking apparatus, the hogs, grain in the loft, and sometimes a wool room, which form a complete nuisance. I am opposed to feeding swine in close buildings where they make their litter, and cooking food under the same roof. The effluvia cannot be very pleasant for man or beast. Truly yours,

S. W. JEWETT.

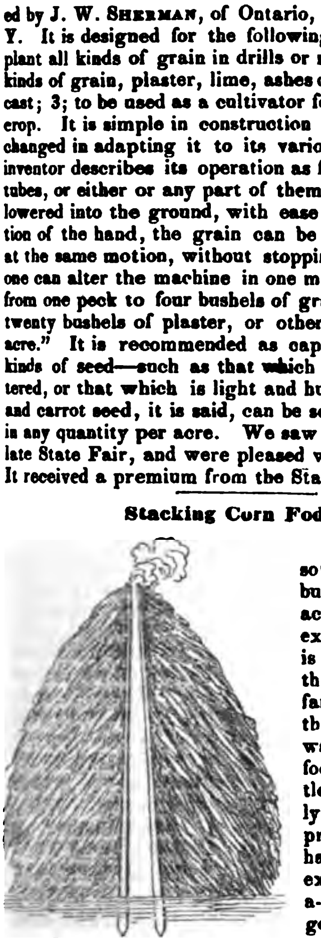
THE FARMER'S NOTE BOOK.



Sherman's Seed Planter and Cultivator.

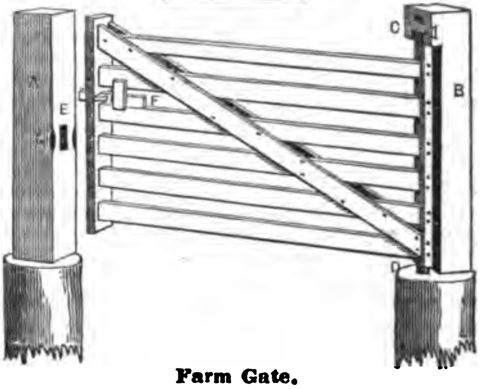
The above is a cut of a machine invented and patented by J. W. **Sherman**, of Ontario, Wayne county, N. Y. It is designed for the following purposes:—1, to plant all kinds of grain in drills or rows; 2, to sow all kinds of grain, plaster, lime, ashes or bone dust, broadcast; 3; to be used as a cultivator for any kind of hoed crop. It is simple in construction and may be readily changed in adapting it to its various purposes. The inventor describes its operation as follows: "All the tubes, or either or any part of them, can be raised or lowered into the ground, with ease; and with one motion of the hand, the grain can be stopped or started at the same motion, without stopping the team. Any one can alter the machine in one minute, so as to sow from one peck to four bushels of grain, or from one to twenty bushels of plaster, or other fine manure, per acre." It is recommended as capable of sowing all kinds of seed—such as that which is soaked and plastered, or that which is light and husky. Even cotton and carrot seed, it is said, can be sown with accuracy, in any quantity per acre. We saw this machine at the late State Fair, and were pleased with its appearance. It received a premium from the State Society.

Stacking Corn Fodder.



The practice of sowing two and a-half bushels of corn per acre in *thick drills*, exclusively for fodder, is rapidly extending through the country, farmers discovering that they can in this way obtain the richest food for wintering cattle which will be wholly consumed, and be preferred to the best hay,—at a cost never exceeding a dollar and a-half per ton, on good land in the country. In planting, the corn is strewn from a hand basket rapidly in the one horse furrows, to be as quickly covered with a common harrow; no hoeing, and but once cultivating, is ever needed; and all weeds are so effectually smothered, that the ground is left as clean as a neat woman's floor.

But thus easily raised, the fodder must be well preserved, or the labor will be lost. If put up in shocks, they should dry several weeks—the *leaves* may be quite dry, while the stalks will furnish moisture enough to cause hot fermentation, mouldiness, or decay. Stacks of this kind of fodder settle very compactly, and the steam from the heating, which must always take place, will not find vent, unless a chimney is made in the middle of the stack, by setting three or four rails, upright in the ground, a foot apart, to form the centre of the stack, as shown in the above figure. A further precaution, highly essential, as well as useful, is to *salt* well the fodder while the stack is going up. Stacks of small size should be preferred, and so placed that in case of much heating, they may be thrown with a fork into a new stack, which is often necessary under unfavorable circumstances.



Farm Gate.

Eds. Cultivator—The above represents, or at least is intended to represent, a farm gate, which in cheapness, convenience and comparative simplicity, of construction, is not excelled by any which has come to my knowledge. I have one on my farm, built by myself, without the aid of carpenter or blacksmith, and commanding general satisfaction.

A. and B. are posts, hewn out of cedar, locust, or rich yellow pine—B. is cut and morticed out in such a manner that the gate can be enclosed in the top part C., by a piece of wood slipped in dove-tail fashion. In the bottom, a 1¼ inch auger hole contains a rich pine knot D., with a round tenon on top; this is received in a hole bored in the bottom of the gate piece; so that by this arrangement it is kept off the ground, and top and bottom of the principal part of the gate, are secured against the injurious effects of water, while the greasy nature of the pine knot on which it turns, causes each movement of the gate to be easy in every kind of weather.

A. has a hole, E., morticed in its centre, to receive the tongue of the latch F.; the last is made according to the model given in your vol. for 1847, page 159.

You will observe that this gate has no iron about it, and opens to its full extent either way, while the latch, by being thrown back with the gate, slips over the notch at G. and shuts itself.

Lightness is one of the main requisites in this subject to keep it from swagging; I have obtained this by making my gate out of ¾ stuff, and the scantling holding the latch 2½ inch square.

In my next I will send you a plan of a machine for drawing hickory, oak and other shrubs out of the soil. **Alb. C. Richard.** *Walden's Ridge, Hamilton Co., Tenn., Sept.* 1848.

On the Use of Fish for Manure.

Messrs. Editors—In those towns in this section bordering on the seacoast, White-fish are extensively used as manure, for all kinds of crops. The price of them varies from 50 cts. to $1.50 a thousand, the ave-age price being about $1. They are caught in large numbers from May till October, in schools varying from 100 fish to 100,000, and are applied to the soil in various ways. Some persons, during the hurry of haying and harvesting, spread them on the surface of the ground, and allow them to dry up by the sun, a stench in the nostrils of every passer by. Others spread them year after year on their rye stubble, as long as they can get ten or fifteen bushels of rye per acre, and until their land is actually fished to death, and overrun with sorrel and noxious weeds.

They are usually spread evenly over the surface of the ground, at the rate of about 10,000 to the acre, and plowed in in the course of twenty-four hours, it being less work than to compost them. But the best way in which they can be used, is to mix them intimately with muck and coalpit dirt, and let them remain over the winter, when they will be changed into a black inodorous mass, forming one of the richest and most valuable composts known. Ten thousand of them composted in this way, at a cost of ten dollars, will produce a rotation of crops without any other manure—say from one to two hundred bushels of potatoes, or fifty bushels of corn, thirty bushels of rye, and two or three crops of grass. This compost spread upon old grass lands, has a most surprising effect. A YOUNG FARMER. *Madison Conn., Sept.* 22, 1848.

Greenbush Premium Farm.

The Rensselaer county Agricultural Society offer premiums for the best cultivated farms in the several towns in the county. From the report of the doings of this society for the present year, we find that our friends Messrs. MCCULLOCH & KIRTLAND, occupants and owners of the *Cantonment Farm*, Greenbush, have been the successful competitors for that town. Having on several occasions visited this farm, and witnessed its judicious management and its progress in improvement, we readily endorse the statement of the committee. The examination by the committee was made on the 16th of September last. We give the following extract from their report:

"The farm is situated about one and a-half miles east of the lower ferry to the city of Albany; contains about 130 acres, all in cultivation, and is a part of the tract of land upon which the United States barracks were erected during the last war with Great Britain. It was purchased by Mr. MCCULLOCH of the government in 1831, and was then in a deplorably neglected condition; a portion of it having been under the plow for many years in succession, by which it had become greatly impoverished; another portion was wet and marshy, producing only a scant and sour herbage, and the whole nearly overrun with bushes. Mr. MCCULLOCH immediately commenced a system of improvement and melioration by clearing, ditching, underdraining, and manuring; which, with a judicious rotation of crops, has been continued to the present time, and has resulted in converting a tract of land, unsightly in appearance, and by many deemed nearly worthless, into one that will compare with any in the county for productiveness and beauty.

"The face of this farm is partly undulating and partly nearly flat; the soil of the former portion is a sandy loam, well adapted to a convertible system of husbandry; that of the latter is a clay loam, with a close subsoil, equally well adapted to meadow and grazing.

"The principal production of this farm is milk, which is carried to the Albany market. The present stock consists of 27 cows, 3 head of young cattle, 4 horses, and 10 swine. Mr. KIRTLAND informed your committee, that the entire product of the 27 cows for the year ending with the date of the visit of your committee, was 64,005 quarts by actual measurement, [being an average of about 6½ quarts per day to each cow, the year round.] The stock of cows are in admirable keeping; several of them are fine specimens of the improved Durham breed and its crosses, and, taken together, your committee have seldom if ever witnessed as fine a stock of cows as that upon this farm.

"About 45 acres of the farm are in pasture, and about the same quantity in meadow, which it is estimated will produce a surplus, after winter-feeding the stock, of 25 tons of hay."

It is a practice with Messrs. McC. & K., to plow their pasture and mowing grounds in August and sow them to rye and grass-seeds, the principal object being to renew the grass as soon as practicable. We are told that they have sown 12 acres in this way the present season. The usual yield of grain thus obtained is 20 bushels per acre.

As this is a grazing farm, the principal object is to keep the land in grass, and hence but a small portion is at any time appropriated to grain or roots. Of the cultivated crops for this year, there were 7¼ acres in barley, which was sowed 25th April, with two bushels of the two of the six-rowed variety to the acre, and ten pounds of clover and half a bushel of timothy seed to the acre. There were 2¼ acres in oats; three acres in potatoes; and four acres in Indian corn—the latter after potatoes, which were planted upon sward without manure. The corn was manured with compost in the hill, and planted on the 16th of May.

As the yield of these crops was only taken by estimation at the time they were examined by the committee, we have applied to Mr. KIRTLAND for the result actually obtained; and he informs us that the barley turned 44¼ bushels per acre—weighed 47½ pounds per bushel, and sold for 76 cents per bushel—being one cent per bushel above the market price; the oats gave 63 bushels per acre, and the corn 75 bushels. The potatoes suffered by the disease, and only gave about half a crop.

Hoove in Cattle.

Perhaps there is not a greater loss of cattle in this country, from any one cause, than from the complaint known as *hoove* or *blown*. It is a distention of the rumen or paunch, by gas arising from vegetable substances, which are eaten by the animal in greater quantity or with more rapidity than they can be digested. The distention causes great pressure on the lungs and heart, impeding their action, and from that cause, or rupture of the rumen, producing death. Green clover, if the animals have an opportunity of gorging themselves with it when they are very hungry, is very likely to produce hoove, as it quickly ferments after being taken into the stomach. Any kind of vegetation, if wet with dew or rain, and especially if it be in a *frosty* condition, frequently occasions this difficulty. Turneps, potatoes, apples, or pumpkins, if eaten in large quantities, sometimes produce the same effects. Some animals seem constitutionally liable to hoove, probably from defective digestive organs. Choking, by some substance being fastened in the gullet, also produces the difficulty.

As to remedies, many of our farmers never use any —the animal is often left to itself—if it recovers, the owner is satisfied; if it dies, *he has the hide*. Those who pretend to offer relief, sometimes give doses of beef-brine, lamp-oil, or soap suds, but more frequently plunge a small knife into the paunch.

The writer has formerly had many animals affected with this complaint, and seldom failed to relieve them by administering alkalies; but care was always taken to give the medicine as soon as the necessity for it appeared. It was the general practice to give a large table-spoonful of pearl-ash or salæratus, dissolved in warm water, to a full grown cow, and a quarter more to an ox. In some instances the sub-carbonate of soda was given instead of the above. These substances were given on the supposition that the distention of the stomach was caused by *carbonic acid* gas, which it was expected would be liberated by combination with the alkalies.

We have lately met with an excellent article by **Thomas Sullivan**, in the *Farmer's Magazine*, which gives a better understanding of the nature of hoove and its proper treatment, than we have before seen. He observes that a correct knowledge of the composition of the gas which occupies the stomach of hooven cattle will lead to the adoption of the speediest means for its liberation. He quotes from a French work the results of an analysis, by which it appears that the gas yielded—

Sulphuretted hydrogen,	80
Carburetted hydrogen,	15
Carbonic acid,	5
	100

Mr. S. observes, however, that accurate analyses indicate that the gas is differently combined at different stages of the complaint. In the earliest stages, it is chiefly carbonic acid; "but it is," he says, "speedily converted into carburetted hydrogen, (formed by the union of carbon with hydrogen,) and finally into sulphuretted hydrogen." He states that the liberation of the gas may be effected by different substances, according to the stage of the affection at the time they are given. He mentions three classes of remedies—stimulants, alkalies and chlorides. "The effect sought to be produced by the use of stimulants," says Mr. **Sullivan**, "is to cause the rumen to contract upon, and thereby, if possible, to expel its contents. Spirits of turpentine is the most commonly used, and probably the most efficacious of this class of medicines. A wine-glass full, or from two to three ounces, may be given in a bottle of water, and it will in most cases operate speedily in allaying the distention. Whiskey is sometimes administered in cases of hoove, and in general with beneficial effects when it can be introduced into the stomach." Alkalies are recommended in the incipient stages of the complaint, but in those only, as it is only at first that carbonic acid exists. He observes, however, that as "hydrogen very soon becomes the predominating constituent of the gas in the distended stomach," chlorides should be employed in preference to all other substances, and that they have, in fact, "generally superceded most of the recipes which were previously resorted to for curing hoove." The chloride of sodium, (common salt,) and the chloride of lime are the substances he prefers, which are not only effectual remedies but are easily obtained.

There are, however, some cases in which the use of medicines will produce no effect, from the great swelling of the stomach before the animal is discovered to be unwell; and in such cases the operation of *puncturing* must be resorted to in order to save the animal's life. But the use of the ordinary knife for this purpose is considered objectionable. Besides the gas, there is a quantity of liquid, mixed with the solid contents of the stomach, discharged through the wound, and Mr. S. observes, that, "although the greater portion of it may be ejected to be driven through the wound in the flank, yet some will necessarily fall into the abdominal cavity, where it soon operates injuriously by causing dangerous irritation, which occasionally terminates in fatal inflammatory disease. I would therefore urge upon every farmer and cattle-feeder, to procure and keep in readiness a small *trocar*, by means of which the operation of puncturing may be performed effectually and without the slightest risk." This instrument is in fact the same that is used by surgeons in tapping human subjects for dropsy. It is described as consisting of "two parts, the *stillet* and *canula*. The stillet is formed of a round rod of iron about five inches in length, terminating at one extremity in a triangular shaped point, and furnished with a wooden handle at the other. The canula is the name applied to the tube in which the rod is sheathed. In using the trocar, it is forced with a thrust into the paunch; and on withdrawing the stillet, the canula is left in the wound as long as may be found necessary, in order to permit the gas, &c. in the stomach to escape through the tube. The possibility of any danger from matter falling into the abdomen, is thus guarded against, and when the gas ceases to escape, which it will do in the course of a day or two after the paunch has been punctured, the canula is to be removed, after which the wound readily heals."

It is proper to remark that hoove from choking will generally be relieved by the removal of the obstruction in the gullet. The most ready mode of effecting this is to use a tarred rope, about an inch in diameter, or three inches in circumference, one end of which should be bound with tow and covered with soft leather. This passed down the gullet, will generally remove any obstruction, and the gas will escape. Liquids poured down the throat, to lubricate the parts, will sometimes enable the animal to swallow the substance, or it may become loosened so that they can throw it up. Warm castor oil, or soft soap, will be found the best articles for this purpose.

Preservation of Food.

An elaborate article on the perpetual preservation of food has lately appeared in the London *Westminster Review*. The writer considers at length the different modes adopted in various countries for the preservation of grain, meats, fruits, vegetables, &c.; and he comes to the conclusion that these processes for the most part, have been "little in advance of the squirrels and other animals;" that they are not as good as those of bees, for "they have an instinctive perception of the true principle, viz. *the exclusion of air*, which they accomplish by hermetically sealing up their honey-cells." He alludes to the preservation of articles of food in tin cases, from which the air is excluded. Meat and other provisions have been kept in this way for years; but he thinks the expense of these methods prevents their ever being more than a luxury.

He mentions a singular, but in many respects useful kind of *granary* adopted by the people of some parts of Spanish America. "The skin of an ox is taken off entire; the legs and neck being tied round, it is filled with tightly-jammed earth through a hole in the back, while suspended between posts. When dried to a state of parchment, the earth is taken out, and the bloated bag, resembling a huge hippopotamus, is filled with grain, which is thus kept air and vermin proof."

He recommends the construction of granaries on the principle of excluding the air, and observes:

"The practicalization of this is neither difficult nor costly: on the contrary, close granaries might be constructed at far less proportional cost than the existing kind. They might be made under ground as well as above ground, in many cases better. They might be constructed of cast iron, like gasometer tanks; or of brick and cement; or of brick and asphalte, like underground water-tanks. It is only required that they should be air-tight and consequently water-tight. A single man-hole at the top, similar to a steam boiler, is all the opening required, with an air-tight cover. The air-pump has long ceased to be a philosophic toy, and has taken its place in the arts as a manufacturer's tool; and no difficulty would exist as to that portion of the mechanism. Now, if we suppose a large cast-iron or brick cylinder sunk in the earth, the bottom being conical, and the top domed over, an air-pump adjusted for exhausting the air, and an Archimedean screw pump to discharge the grain, we have the whole apparatus complete. If we provide for *wet* grain, a water-pump may be added, as to a leaky ship. Suppose, now, a cargo of grain, partly germinating, and containing rats, mice, and weevils, to be shot into this reservoir, the cover put on and luted, and the air pump at work, the germination would instantly cease, and the animal functions would be suspended. If it be objected that they would revive with the admission of the air, we answer, that the air need not be admitted, save to empty the reservoir. If it be contended that the reservoir may be leaky, we answer, so may a ship; and if so, the air-pump must be set to work just as is the case with a water pump in a leaky ship.

"The same arrangements that are good on land are good at sea. Many cargoes of wheat have been abandoned owing to heat and germination on their passage. Rats, mice, and weevils, also, are very destructive. If the vessel were built with metal-lined, air-tight compartments, the air might be exhausted by a pump; occasionally trying the pump to ensure against leakage; and thus even new, undried grain, might be carried and delivered across the sea undamaged. Collateral advantages would also be gained; the vessel would be more safe by means of air-tight compartments, and also more buoyant. And the same arrangements would be equally available for various kinds of goods, subject to damage in transit,—such as are hermetically sealed in tin cases; and thus the expense of packages would be saved.

"In reservoirs on shore the air might not merely be pumped *out;* warm air might be pumped *in*, to dry damp grain. Water might also be pumped in and out to *cleanse* the grain.

"Similar reservoirs or magazines on a similar scale might be constructed for butchers or other provision dealers, and meat might be preserved fresh for weeks in the heat of summer, preventing the necessity of waste, or of selling at ruinous low prices; and so with the fish brought to Billingsgate or other markets. On the same principle; there is no doubt, that fresh meat, as sea stock, might be carried instead of salt meat, and that fresh provisions might be transported from any part of the world to any other part. Pork, or beef, or mutton, or venison, might be killed in America and transported to England. Weevily biscuit would be a traditional commodity only, in the annals of sailor craft.

"As regards the economy of transport of grain from foreign countries, the process would be as follows. The corn brought down the Mississippi to New Orleans, or by canal or railroad to New York, would be discharged into the air-tight magazines of the vessel. On arriving at Liverpool, or Birkenhead, or Harwich, the Archimedean screw pump would discharge the grain into close waggons on a railway on the edge of the quay. These wagons might be rendered measurers of quantity, being all made to hold a given number of quarters; and thus all labor in expense and measuring would be saved. The wagons so loaded in bulk, and without the expense of sacks, would discharge their contents into reservoirs beneath the sidings; say for instance, the railway arches of the Eastern Counties. There it might remain secure against all detriment for any number of years the owner might desire, with the minimum of expense in transit and stowage. The wagons would be constructed with a hatch at top; and a discharge-pipe below."

Cut and pile wood before snow gets deep, and have it ready for hauling the first sledding.

How to raise Thirty Bushels of Wheat per acre

Where you could not raise twenty before.

EDS. CULTIVATOR—Where you have a good clover sod, let the clover grow until the first week in June; then take a good team and plow, and turn the clover all under; then roll the sod down flat, and let it lay eight or ten days; then take a light harrow or cultivator, and pulverize the ground fine, and about the 25th of June sow 2¼ bushels of corn to the acre, and after harrowing it well, roll it down smooth. About the last week in August, take your roller and press the corn down as flat as possible, going round with the roller the same way you intend to plow the land; then plow the land as deep as possible, and turn all the corn under—follow with the roller, pressing all down flat. Thus you have two crops well mixed with the soil for manure.

Then take a light harrow or cultivator, and pulverize the ground fine, and sow your wheat about the middle of September, and if you do not have one-third more wheat than you do where you summer fallow, tell me I am mistaken in a cheap method of manuring land. The corn will grow so thick that it will keep every other plant down, and leave the ground clean, and if there is a few small leaves of the corn scratched up with the harrow, it will afford a good top dressing for the wheat. IRA HOPKINS. *Auburn, Sept.* 22 1848.

Maryland Lands.

EDS. CULTIVATOR—My communication respecting lands in Maryland, which appeared in the September No. of the *Cultivator*, has elicited numerous letters from your state and the eastern states; the writers making many inquiries respecting the lands, their condition, prices, &c.

Can you state in your October number, for the information of your northern readers, that this is the healthiest country in the world; remote from all large bodies of water, and all marshy lands, there are no epidemics whatever. There is a great abundance of fine spring water, many fine waterpowers unemployed, large bodies of fine chestnut and oak timber, and lime in every direction—that land, long thrown out, and easily brought into a fine state of fertility by the use of lime and plaster, can be purchased for ten dollars per acre—one-third down, the balance to remain for 5 to 8 years. Farms under cultivation, with tolerable buildings, may be bought for from fifteen to twenty dollars per acre, and improved farms within thirteen miles of the city of Baltimore, which is one of the best markets in the United States, and situated in the very midst of the limestone region, may be purchased for thirty dollars per acre, on equally accommodating terms. These farms contain from 150 to 300 acres.

It may be well here to remark that plenty of highly improved farms in this county would bring from eighty to one hundred dollars per acre.

I am 18 miles from Baltimore, and all around me are these vacant lands and farms which have been suffered to run down and which are in the market. I am within three miles of a good turnpike to Baltimore, and none of the above mentioned lands more than five miles from one or the other of the turnpikes to the city. I shall be happy to answer all letters (post paid,) which are addressed me on this subject.

Persons anxious of seeing the country, will on application to Mr. Thomas Street, Bull's Head tavern, North Front street, near Gay st., Baltimore, be directed how they may reach my farm by the returning market wagons, and I will show them the country in this vicinity with great pleasure. W. B. HAMILTON. *Long Green, Baltimore Co., Md., Sept. 23d*, 1848.

Disease in Sheep.

In the October number, page 322, of the *Cultivator*, your correspondent seeks for information in relation to a disease that has proved very fatal among his sheep, and for which you also seek a remedy.

I will first endeavor to explain the functions of the parts involved in the disease, their location, and the indications of cure. The seat of the disease is in the mucous membrane, which is a continuation of the external skin, folded into all the orifices of the body, as the mouth, eyes, nose, ears, lungs, stomach, intestines and bladder; its structure of arterial capillaries, veins, arteries, nerves, &c., is similar to the external skin; its most extensive surfaces are those of the lungs and intestines, the former of which is supposed to be greater than the whole external surface of the body.

The healthy office of this membrane, is to furnish from the blood of a fluid called mucous, to lubricate its own surface and protect it from the action of materials taken into the system. The mucous membrane and the external surface of the body, seem to be a counterpart of each other, and perform nearly the same offices; hence if the action of one is suppressed, the other commences the performance of its office; thus a cold which closes the skin immediately stops the perspiration, which is now forced through the mucous membrane, producing the discharge of watery humors, pus intermixed with blood, dry cough, emaciation, &c., alluded to by Mr. Ferris. There are two varieties of this disease; the first is called *common catarrh*, which proceeds from cold taken in pasture that is not properly drained, also from atmospheric changes; it may also proceed from acrid or other irritating effluvia inhaled in the air, or from poisonous substances taken in the stomach in the form of food. The second variety and the one to which Mr. F. may ascribe the loss of his sheep, is called *Epidemic Influenza*, and is produced by general causes; the attack is sometimes sudden; although of nearly the same nature as the first form, it is more obstinate, and the treatment must be more energetic. It is very difficult to lay down correct rules for the treatment of this malady, under its different forms and stages; the principal object to be kept in view is to equalize the circulation, remove the irrritating causes from the organs affected, and restore the tone of the system.

For this purpose, we make use of the following articles: Take

1 oz. of Horehound,
1 " Marshmallow,
½ " powdered Elecampane,
½ " " Liquorice,
¼ tea spoon full powdered Cayenne,
2 table spoons full Molasses,
2 " " Vinegar.

Mix, pour on the whole one quart of boiling water, set it aside for two hours, then strain through cotton cloth, and give a table spoon full night and morning.* If the bowels are constipated, a dose of linseed oil should precede the mixture; no water should be allowed during the treatment.

The following injection may be used night and morning: take,

1 oz. of powdered Bayberry bark,
¼ " " Gum Arabic,
1 pint of boiling water.

Stir occasionally while cooling and strain as above.

The legs and ears should be briskly rubbed with tincture of capsicum; this latter acts as a counter irritant, equalizes the circulation, and entering into the system, gives tone and vigor to the whole animal economy. G. H. DADD, M. D. *Boston, Oct.* 9, 1848.

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*This preparation undergoes a process of fermentation in the course of forty-eight hours, therefore should only be made in sufficient quantities for present use.

Kentucky Wild Lands.

Kentucky grazing lands are as good as any in the world. This is acknowledged by all who have any practical acquaintance with them. What can surpass the blue grass pastures of the regions around Maysville, Paris, Lexington, Frankfort and Louisville? Eastern men are prone to seek a grazing rather than a planting region as the field of their operations, and some are now turning their attention to the wild lands of Kentucky, as affording a better opportunity of investment than the prairies of the West. In Kentucky, wild lands adapted to grazing, can be purchased at from 50 cts. to $10 per acre—good lands, at an average of $2 per acre. Go up the Licking, towards Frankfort, or up the Ohio, and this can be done. And on a well selected location, the timber on the land for lumber purposes, is worth ten times the cost of the purchase money. Let an enterprising New England farmer, with a little capital to start upon, purchase a tract of land in the neighborhood of any great thoroughfare—as either of these rivers—and erect on the premises a good saw mill, to be operated by steam or water power, and the mill will make money rapidly for him, in preparing lumber for market—and there is always a good market at Cincinnati—while at at the same time it is clearing his land, for grazing. Thousands and thousands of acres of land are lying within 100 miles of Cincinnati, which, when cleared and in grass, will be worth from $10 to $20 per acre—and the lumber will pay for clearing the land, and leave a handsome profit besides. And why should not New England men take up these lands rather than go on to the prairies of the wide west? No healthier region of country exists in the known world. There are few or no slaves to be found there, and it is fully believed that Kentucky will be a free state on the gradual emancipation plan within five years—so that slavery will be no objection. There is the Marshall tract—25,000 acres, opposite and below Portsmouth—the Triplett tract, not far from Maysville, and other tracts where eligible purchases might be made. A simple ashery will pay all expense of clearing, provided no use is made of timber for lumber purposes. As a matter of illustration we might refer to the operations of the Kinniconick Railroad and Mill Company.

This company was chartered March 1, 1848, by the Kentucky Legislature, and went into immediate operation. The land had been previously purchased by three members of the present company, and stocked with choice sheep, with the view of raising wool and sheep for sale. The Company have built a railroad running back from Vanceburgh, Ky., about seven miles—into their timber tract, consisting of about 16,000 acres. At the extreme end of the road, and on the bank of the Kinniconick—a little river—they have built a mill 35 by 100 feet, to be worked by steam, capable of sawing 10,000 feet per day. The mill has three engines, one for driving a single saw, one for driving a gang of 18 saws, and one for driving any other machines the company may erect. All these engines are of high power. The saw-dust, together with a portion of the slabs, make all the steam required. The lumber when sawed at the mill is worth on the average, $10 per thousand, and will sell in market for $12.50 and upwards. Stave-dressing machines are to be connected with the mill, and circular saws for sawing a portion of the slabs into lath. The company have fenced in 2,000 acres of land in the neighborhood of the mill, from which they are now sawing the lumber—and many portions of this tract are worth $50 an acre for sawing purposes alone. The company now have about 500 acres cleared, and mostly set in grass. They have also on the premises about 1000 head of choice sheep, besides some cattle and horses. Wood from their land sells for $3.50 per cord by wholesale in Cincinnati market; and chestnut oak bark, of which they have vast quantities, at $10 pr cord. The lumber, the wood and the chestnut-oak bark are being prepared for market constantly. It is expected that from 4,000 to 5,000 cords of wood will be sold in the course of the coming year, and from 1,000 to 2,000 cords of bark, and about 250,000 ft. of lumber per month through the year. They will clear about 300 acres of land and seed in blue-grass, timothy and clover. They have made arrangements to raise 1,500 bushels of corn, 1,500 bushels of oats—1,000 bushels of potatoes, 2,500 of turneps, 100 of beans, &c.

In addition, they have made and are making arrangements to have two ships built at their landing during the coming summer; also, to have fifty vine-dressers and their families from the Rhine, commence operations for the raising of grapes on their own account, during the coming spring, by furnishing them land for planting their vineyards. It is expected that these families will be followed by others in due course of time, having the same object in view. The members of the K. R. R. & Mill Company, are nearly all New England men, and if they accomplish one half they intend, it will be demonstrated that men need not go to the prairies to make good investments. B. *Oct.* 11, 1848.

Large Cattle.

The following are the weights and dimensions of the most remarkable of the fat cattle exhibited at the late State show at Buffalo.

J. and F. A. Alberger, of Buffalo, exhibited two oxen, called *Empire State* and *Queen City*. The former measured in girth, behind the fore legs, 9 feet 3 1-2 inches: and his length from shoulder to end of rump was 7 feet 3 inches; the latter measured in girth, 9 feet, and in length, 7 feet 7 inches. The aggregate weight of the two was 5,784 lbs.

Two oxen shown by Lyman Brainard, girthed, each, 8 feet 10 inches—length, 6 feet 7 inches—weight of the two, 4,800 lbs.

Two oxen shown by L. Doty, measured, in girth, 8 feet 6 inches, and 8 feet 3 inches; in length, 7 feet 7 inches, and 6 feet 3 inches—weight of the two, 4,670 lbs.

An ox shown by Edward Munson, girthed 9 feet—length, 7 feet 8 1-2 inches—weight, 3,100 lbs.

The following were the live weight of cattle four years old :

A pair shown by	E. Sheldon,	4,295 lbs.
" " "	B. Humphrey,	4,037 1-2
" " "	John Burns,	3,887 1-2
One ox " "	Heny Dixon,	2,200
" " "	E. Munson,	2,100

A pair of steers, three years old, shown by J. S. Wadsworth, weighed 3,390 lbs.; and a two-year-old steer, shown by the same gentleman, weighed 1,497 lbs.

A fat cow, 7 years old, shown by R. Hadfield, weighed 1,742 lbs.; and one 5 years old, shown by Robert Fowler, weighed 2,030 lbs. One 5 years old, shown by Allen Ayrault, weighed 1,652 lbs. One 6 years old, shown by Norman Kibbe, weighed 1,645. (This was only grass-fed. She was a cross of the Durham and Devon, and a very fine animal.)

R. I. Canfield, New Milford, Ct., exhibited a pair of cattle, 4 years old, at the late show at Litchfield, which weighed 4,600 lbs.

It may be interesting to compare these cattle with others of large size which have formerly attracted attention. The celebrated *Durham ox*, bred by Chas. Colling in 1796, measured, at ten years old, as follows : girth, behind the shoulders, 10 feet ; breadth, at the shoulders 2 feet 7 inches, across the hips 2 feet 7 inches. We have no means of ascertaining his live weight at that time; but he was slaughtered the following year, in consequence of an accident, and though he was thought to have lost considerably in weight, his four quarters weighed 2,322 lbs., his tallow 156 lbs., and his hide 142 lbs.—making a total dressed weight of 2,620 lbs.

The oxen, *Maximus* and *Magnus*, bred by Col. Chapin, Springfield, Mass., exhibited at the show of the Massachusetts Agricultural Society, in 1817,—(the cattle being six and a half years old)—measured as follows : *Maximus*, girth, 9 feet; breadth across the hips 2 feet 6 inches—across the shoulders 2 feet 7 1-2 inches. *Magnus*, girth, 9 feet; breadth across the hips, 2 feet 6 inches—across the shoulders, 2 feet 5 1-2 inches. We have never seen any account of the live weight of these cattle, and only know the dressed weight of the smaller one, which was 2000.

The famous Broughton heifer, *Peach*, bred by Sir Charles R. Tempest—which won the gold medal of the Smithfield Club, in 1843,—and a model of which may be seen at the office of the Cultivator,—was four years and 10 months old, and gave the following dressed weight: four quarters, 1,770 lbs., tallow, 228 lbs., hide, 120 lbs.—total, 2,118 lbs.

Propagation of Mushrooms.

The propagation of mushrooms has not received much attention in this country—the few that are here used for culinary purposes, being generally of spontaneous growth. The use of the vegetable is, however, increasing, and there is no reason why it may not become as common here as in European countries. It has been supposed by some that they were of no real value as food—that they are only suitable for forming condiments, sauces and ketchups; but chemical investigation has shown them to be rich in nitrogen—the basis of muscle, &c. The following extracts from an article in the Transactions of the Caledonian Horticultural Society, contain useful directions in regard to the propagation of mushrooms :

" Mushroom spawn (or the mycelium of the Agaricus campestris) may often be found on the floor of an empty out-house where horses had been kept for a length of time. It may be preserved in small masses in a dry place for future use.

There are various ways of increasing mushroom spawn, but the following is, perhaps, one of the most simple. In the month of July prepare a quantity of short-litter, mixed with horse droppings. Lay this heap in the corner of a shed, about two feet thick, beating it gently down. The heap will heat pretty strongly at first, but when the heat has subsided till about milk warm, insert pieces of spawn into the centre of the heap. If the heap get cold, and there be not enough of heat to cause the spawn to run, cover the heap with warm horse-dung, so as to diffuse a gentle heat through the whole mass. When the spawn has run through every part, have the whole taken into a dry loft, where it is to be kept until wanted.

" The material I make up a mushroom bed with, consists entirely of horse-droppings—preferring those of horses kept on oats and hay, which are far more productive than those of horses fed with grass and clover, or other soft food. The droppings are collected inte a shed as they may be gathered from the stables, turning the mass out in the day time to dry a little, if weather permit. When we have collected enough to make a bed, I have it all taken into the mushroom-house, and if not dried enough, it is spread on the floor and on the tops of the flues, turning once or twice a day, until we consider it half dried. It is laid altogether in a heap to sweat the rank heat of it, turning it over three or four times a day to keep it from burning. When the heat has well subsided, which is generally in about five or six days, we begin to make up the bed, on a shelf, fitted, 2 feet 6 inches broad and 11 inches deep. This is filled within one inch of the top, beating the mass down in successive portions with a brick or mallet, as firm as possible, as the shelf is being filled. If it do not heat very vehemently, then all is going on well; but if it begin to burn, turn up with a dung-fork, to let the rank heat escape; when that has passed off, beat all down as before, and in a day or two the bed is ready for spawning.

"The heat in the bed when spawned, should not exceed 90° Fahrenheit, when the thermometer is sunk 5 inches into the bed. When of this heat insert pieces of spawn a little larger than a hen's egg, 9 inches apart, and just so deep as to be little more than covered. Lay on earth immediately, of a strong loomy character, 3 inches deep, and beat it all over firm with the back of a spade. In this state let the bed lie for eight or ten days, by which time the heat has declined a little.—Then cover it all over with hay, which increases the heat considerably; water it on the top of the hay with a syringe, two or three times a week, with water of the same temperature as the house, which is generally about 60° Fahrenheit. I never water directly on the surface of the bed, finding this, from experience, to have a very bad effect. In about five or six weeks at longest, the mushrooms make their appearance. I generally gather two pints a day from a bed 2 1-2 feet broad by 27 feet long. I have frequently, however, got as much as two pecks in one day when the bed was in full bearing; and on one occasion I had 2 1-2 quart bottles of ketchup made from a single gathering."

Rules for Plowing.

The Committee on Plowing at the late exhibition of the Onondaga county Agricultural Society, laid down the following rules. In regard to the first rule, we think the nature of the subsoil should be regarded in deciding on the depth of furrow—though six inches may be shallow enough for any soil. In some cases, where the subsoil is rich in the substances which constitute the food of plants, there is often great advantage in bringing the lower earth to the surface, where, by the action of air, heat, &c., it becomes a manure; but where the elements of fertility are to be *added* to the soil—that is, when the richness does not naturally exist, but is applied—we are in favor of less depth of furrow; though we would loosen and stir the earth as much as practicable with the subsoil plow.

"First, the ground should all be plowed and in no case *less* than six inches deep. The fertility of the soil will be greatly increased if the depth is gradually increased to twelve inches, and a greater depth is desirable.

"Secondly, the *furrow* should be well turned. And to do this the *width* of the furrow slice must always (except in the summer fallowing) be graduated to the *depth* of the furrow. If the furrow is too deep for the breadth cut, the slice will stand edgewise. If the slice is too wide for the depth of the furrow, a "balk" will be left on which nothing ought to be expected to grow, and if the next furrow is properly plowed, a hole will be left where the preceding furrow was improperly turned.

"Thirdly, where the surface of the ground will permit, the furrow should be *straight*, that the work may be more easily performed and have a more workmanlike appearance than it otherwise would have.

"Fourthly, where the earth is light and sandy, the flat furrow is best because it leaves the soil more compact, and less likely to be injured by drouth. If the soil is stiff and inclining to clay, the furrow is best if left at an angle of forty-five degrees, because the harrow will most effectually operate on the surface, and under each furrow a small channel will be left which will assist in disposing of the surplus water which may fall upon the surface, and also will render the soil more loose and friable."

To the above we add the following extract from the report of the Committee on plowing, at the late Pittsfield (Mass.) exhibition:

"Your Committe at this time beg to offer a few remarks on what remains to be done in the way of improvement. The work we have seen to-day approaches near to perfection, according to the general standard. The whole surface was thoroughly turned over, the depth and width well preserved. The only noticeable defects we have remarked on this and other occasions being that the dead furrow is not in all cases handsomely cleared up, and more care might be well bestowed in making the ends of the lands even. Although there may be some practical objections to the plan, it is worthy of consideration whether each plowman should not be required to stake a land and open the first furrow for himself, a requirement which would be a sure test of the skill of the workman and of the care with which his team was broken. According to the present plan, a superior plow may, and frequently does, make all the difference observable in the work of two men, while the skill may be on the losing side. It has been remarked that this plowing is nearly perfect, according to our standard. It remains to inquire in what respect our standard is imperfect. The answer is in the fact that if an average-plowed field here be compared with one in many foreign countries where the plows are greatly inferior in all respects to ours we shall find the comparison tells against us. The difference is less observable in sward plowing, which is necessarily the only species of plowing practiced at plowing-matches. In the art of plowing a given piece of sward *flat*, we may challenge competition. Whether flat furrows even in sward are the best is an open question. Without entering into the merits of the two systems it may not be out of place to mention that in consequence of some remarks in favor of this method by the Committee of last year, the subject was discussed by the North Stockbridge Farmer's Club, when it appeared that the nearly unanimous opinion was in favor of the shingling or lapped furrows. It is however, in the plowing of mellow land that we are most in fault, which arises on one side, from our pursuing the same system on the fallow that we do on the sward, of plowing wide and reversing flat, and on the other hand from the little care that is used in staking out the field in a scientific manner, and according to a well understood plan. It is to be regretted that neither of these subjects, fallow plowing, or the staking out of fields, which are at once a school and a test of good plowing, can come before the public at a ploughing-match; but a means might be devised whereby premiums should be offered for the best and most scientific fallow of five or ten acres, on the applicant's own farm, in the same way as we offer premiums for the best acre of corn or rye. It is believed that the best results might follow the adoption of such a plan."

Saving Pumpkins.

Every farmer who raises many pumpkins, usually loses a large portion, or else loses a large portion of their value, by freezing during sharp autumnal frosts. Some keep them into winter, and not having cellar room, throw them to the cows, when frozen about as hard as a brick-bat, and their ice-ribbed exterior resisting the sharpest teeth of a young brindle.

Gathering pumpkins and stacking corn-fodder are often performed on the same day; and if the farmer, when he builds his stack of stalks, will make a layer of pumpkins and then a layer of corn-fodder, they will be effectually protected from the frosts of winter, and if perfectly sound when gathered, will even keep into spring, if the stock is not consumed by that time.

Laboring Communities.

Hon. Harvey Baldwin, in his address before the Onondaga County Agricultural Society, made some good remarks in reference to the effects of industry, as compared with indolence, on the character and prosperity of communities. He came to the conclusion that as "a general principle, that community which is required to toil the most constantly, to economise the most closely and live most frugally, will be found to be physically, morally and intellectually in the best condition." He made some comparisons in illustration of the principle: "Look for example to the azure sky—the bland atmosphere—the temperate climate—the fertile soil of Italy, and there behold her people—as a nation—ignorant, trifling, licentious, depraved and beggarly poor, numbering more of the lazaroni, than perhaps any other nation on earth. Look to the Ocean Isles, and especially those that border our own Southern coast; warmed by a tropical sun and fanned by a perpetual summer's breeze, their fat and fertile soils yield almost without tillage or toil in the greatest luxuriance and profusion, everything necessary to the support and comfort of man; and yet as a whole, how miserable, degraded, licentious, ignorant and debased." On the other hand he refers to New England and the Northern States, "where from necessity the people are all obliged to live in the constant practice of all these virtues, and where on earth will you find a better people than they—it is their climate—their frugal habits, their constant and persevering industry that contributes largely to make them so."

The Florida Ever-Glades.

We have received from Hon. Mr. Wescott, member of the United States Senate from Florida, a copy of Congressional Document 242, containing a copy of the Bill reported by that gentlemen at the late session of Congress, "to authorize the draining of the Ever-Glades in the State of Florida, by said State, and to grant the same to said State for that purpose." The Document contains a great amount of interesting information relating to this subject. It seems that the tract which it is proposed to reclaim, comprises, by estimation about one million of acres—the cost of reclamation is estimated at half a million of dollars—and it is thought that the tract would be capable of supporting a population of 250,000. At the present time these Ever-Glades are nearly worthless. The tract is mostly covered with water-grasses, growing from six to ten feet high, and the soil is more or less covered with water all the year. The basis is said to be lime-stone, upon which a deep vegetable deposite has accumulated from the decay of the plants produced for ages. The general surface of the soil being 12 or 15 feet above the level of the sea, it is proposed to drain it by cutting canals through various portions,—they emptying into tide creeks or rivers, which it is said extend up into the Ever-Glades. When this body of land is made suitable for cultivation, it is proposed to introduce the various tropical plants, valuable in commerce. The tract is situated to the southward of 27° 30′, where there is no frost, and where many productions may be obtained that will not grow in other parts of the United States. The following schedule is given of the articles which it is proposed to introduce:

Compty, yam, casava, ginger, pulka. Sisal hemp, indigo, tobacco, cortex cascarilla, canilla alba, sarsaparilla, sugar cane, pepper, bush and vine pepper, pimento, tea plant, orange, guava, Otaheite plum, shaddock, lime, hog plum, forbidden fruit, lemon. Jamaica apple, grape fruit, citron, sugar apple, banana, pineapple, cocoanut, plantain, sapadilla, sour sop, Avocato pear, mango, mame, olive, mame sapota, boxwood, lignumvitæ, mahogany, titi, and ship timber.

If the scheme proposed by Mr. Wescott and his associates, can be carried out—and there is certainly much evidence of its feasibility—it seems to us that the results could not fail to be vastly beneficial to the country.

Pork Making.

By the way of improvement in agriculture in all its various branches, such as tilling the soil, and improving stock of all kinds, Shelburne, in Franklin county, (Mass.,) I think is not excelled by any town in the state. In raising pork and pigs, they are a little the tallest yet. One hog raised and fattened last winter, by Mr. O. O. Bordwell, (a subscriber of yours,) slaughtered when just eighteen months old, weighed when dressed 735 lbs., neat weight. A litter of pigs, five in number, raised by Charles Smith, farrowed the 10th day of August, 1848, weighed, when just 5½ weeks old, No. 1, 30 lbs.—No. 2, 29¼ lbs.—No. 3, 29¼ lbs.—No. 4, 28¼ lbs.—No. 5, 27½ lbs.; making the whole, 144 lbs. For symmetry of form, and fineness of bone, they are not excelled by any thing of their kind. The sow was just one year old, fed only with milk and slop from the kitchen, up to time of weaning her pigs; she is of fine form: weight judged to be 400 lbs, live weight. Charles Smith. *Shelburne, Mass.*, Sept. 25, 1848.

Principles of Plowing.—The editor of the *Canadian Cultivator*, who attended the State Fair at Buffalo, spoke in contemptuous terms of the "yankee plows" as compared with those made after the Scotch pattern. The *Maine Farmer*, in an article suggested by the remarks in the first-mentioned journal, gives the following sensible observations on the principles of plowing:—"Setting aside the mooted question, which is best, a furrow laid over complelely flat, or set up on its edge—we shall limit the principles of turning, sward land for instance, to two. The first principle is this: The furrow slice, from the point of the plow to the heel of the mould-board, is, in form, the thread of a screw; or, perhaps it would better illustrate it, to compare it to the web of a screw auger, with a long twist. Take an elastic saw plate, fasten one end to the table, and turn it so that at the other end the under side is uppermost, and you represent the furrow in all its positions, from the first lifting from its bed—its progress or transition over—and its position when over. The mould-board, or whole plow should be of the shape that will cut a slice of ground, of given width and depth, and place it in that position, with the least friction or resistance, and of course with the least expenditure of force. As the plow is in progressive motion during the turning of this slice of earth, it will be found that there is a proper medium of length suitable, to accomplish this. If it be too short and too curved, it will break the slice, and push it over unsteadily, like the crowding of a blunt wedge through the soil. If it be of just the right length, it will lift the slice easily, and gradually,—turn it gently and completely, and leave it perfectly reversed in position. If too long, it renders the implement cumbrous and prolongs the friction to a useless degree.

"The other principle is: To have the beam of such a length and in such a position as to enable the power, or draft, to be applied equally, nearest the point of greatest resistance, and to have the handles of such length and slope as to enable the plowman to guide, turn and handle it, while in operation, with the least expense of force and time."

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications received since our last, from Alfred Coffin, Ira Hopkins, W. I. I., Charles Smith, W. B. Hamilton, A Young Farmer, G. H. Dadd, B., J., N. Longworth.

Books, Pamphlets, &c., have been received, during the past month, as follows:—Catalogue of the Lake Erie Nurseries, Cleveland, Ohio, Elliott & Co, proprietors—Catalogue of Seneca Lake Highland Nurseries, Catharine, N. Y., E. C. Frost, proprietor—Patent Office Report, from Hon. J. D. Wescott, Jr., U. S. Senate—Catalogue of the Highland Nurseries, Newburgh, A. Saul & Co., proprietors, (late A. J. Downing & Co.)

Old Cheese.—We have received from Mr. J. Cary, a sample of cheese *nine* years old. It is of excellent quality, though we cannot say whether it has constantly improved, or was actually improving with age. If it had not yet reached all attainable perfection, we should like to know how much time would be required for that object.

Fine Saxon Sheep.—We had lately the opportunity of seeing the flock of Saxon sheep owned by Mr. Chas. B. Smith, of Woolcottville, Litchfield county, Ct. This flock has been widely known for several years, and we had occasionally seen specimens from it which were of superior quality. Mr. S. has a smaller number than usual, having sold many. He has now about 200. His breeding ewes are a very superior lot—healthy, well-shaped, and of beautiful fineness and evenness of fleece. They are also very uniform in their appearance and quality, showing that the breeder is accomplishing his object. The average weight of fleece, washed in the way formerly practiced has been 2¾ to 3 pounds per head; but since Mr. S. has adopted the plan of more thorough cleansing, the average has been reduced to 2¼ and 2¾ lbs. Mr. Smith has on several occasions imported sheep from Germany, and has lately sent out an order for twenty, which he expects will soon arrive in this country.

Importation of Woolen Goods.—Some of our readers are probably aware that great quantities of European woolen goods have latterly been thrown into our markets. A correspondent who appears to be familiar with the subject, informs us that the French and Belgian governments are allowing bounties of 12 to 14 per cent. on the exportation of such cloths. The duties at our custom houses are charged at the short price. The case is thus illustrated:—"An article is bought of a French manufacturer at $100; on shipment at Havre a bounty of $12 is allowed, which reduces the article to $88; the duty in this country, 30 per cent. is $26.40, bringing the article into our markets at $114.40, whereas it should be $130."

It is remarked that every yard of foreign broadcloth occupies the space of one fleece of American wool, and that under the complete surfeit of goods imported under the above system, the low price of wool here, and the general stagnation of the trade, is unavoidable. We would suggest the inquiry whether this state of things was contemplated when the tariff of 1846 was framed?

Milking Cows.—It is important that all the milk should be drawn from the udder; if it be not, the quantity secreted will diminish in proportion to the quantity left at each milking. That which is left in the udder is re-absorbed into the system, and the next milking will be so much less in quantity. Cows will not yield their milk to a person they dislike; but will show by their quiet attitude and chewing the cud that the operation, when performed by a gentle and expert milker, is productive of pleasure. The udder and teats should always be washed clean with water, which in the winter should be warmed. This will not only insure the cleanliness of the milk, but will cause it to flow more freely.

Woolen Rags for Manure.—The waste of woolen factories, and woolen rags, make a valuable manure. They may be made up into compost and remain till rotted, or may be used by themselves. A correspondent of the *Ag. Gazette* gives his mode of using the rags. He runs them through a straw-cutter, and then spreads them on grass-land. On some adjoining land he had applied lime, and also bone-dust, at a greater cost than the rags, but the latter produced the greatest results. He has tried mixing them with lime, but finds they are not so good "as the lime kills the greasy matter, and injures their fertilizing qualities." Perhaps ashes, or potash, by forming a soluble soap, would do better.

Early-sown Rye may be fed with sheep or calves, during the month of November, with great benefit to the stock, and, if the growth is large, with decided benefit to the crop, as a large quantity of herbage, lying on the ground in the winter, renders the crop liable to be "smothered," as it is called, especially if it is covered long with snow. No injury results from feeding rye with sheep or light cattle, any time in winter, except when the ground is so soft that it would be "poached," and the roots of the rye be broken; and there is no food better for such animals. We have often seen a young calf or lamb so improved by grazing on rye, late in the fall and early in winter, that they not only held their own when returned with the rest, but took the lead in thrift and growth. Rye is frequently sown for the purpose of being fed by stock, in the southern part of Ohio and in Kentucky. It is also the best crop for early *soiling*. It starts early, and may be cut several times before any other article is far enough advanced for the purpose.

Premium on Straw Cutters.—The premium awarded for best straw cutter at the fair at Buffalo to Rapalje & Briggs, of Rochester, was for a straw cutter manufactured by Ruggles, Nourse & Mason, of Worcester, Mass.—entered by Messrs. Rapalje & Briggs. B. P. Johnson, Secretary.
Agricultural Rooms, Albany, Oct. 17, 1848.

Nipping off the tops of potatoes.—A few months since, Dr. Klotch recommended nipping off the tops of potatoes, while growing, in order to prevent the attack of the disease. A foreign paper gives the result of an experiment to test this, from which it appears that of two parallel rows, equal in extent, one having the tops nipped off as recommended, and the other left untouched, the latter gave 27 pounds more of sound potatoes than the former.

Fattening cattle with mixed food.—A Scotchman who fattens 150 head of Galloway cattle, annually, finds it most economical to feed with bruised flax-seed, boiled with meal of barley, oats, or Indian corn, at the rate of one part flax seed to three parts meal, by weight,—the cooked compound to be afterwards mixed with oat straw or hay. From four to twelve pounds of the compound are given to each beast per day.—Would it not be well for some of our farmers who stall-feed cattle, to try this or a similar mode? We are by no means certain that ordinary food would pay the expense of cooking; but flax-seed is known to be highly nutritious, and the cooking would not only facilitate its digestion, but it would serve by mixing to render the other food palatable, and by promoting the appetite and health of the animal, would be likely to hasten its thrift.

Flour from sprouted grain.—A correspondent at Granville, Ohio, states that the wheat in that neighborhood was injured last year, by wet weather, and wishes to know what would be the best mode of making bread from the flour of wheat that had been damaged in that way. Will some one answer?

Agricultural Guide and Almanac for 1849.—Edited by M. M. Rodgers, M. D., and published by Shepard & Reed, Rochester, N. Y. It is a manual containing much useful information.

Answers to Inquiries.

Fattening Swine.—"Young Farmer"—If your corn is *hard*, it will do the animals more good if ground than if fed whole. As to feeding the meal wet or dry, there is probably no difference, unless it is to be cooked. We do not suppose that it "*adds* to its nutriment to cook it"—but we think the cooking brings the food into a condition in which the nutriment is easier and more thoroughly extracted. The "proportionate" gain by cooking must depend on circumstances, such as the hardness of the grain, and the quantity fed to the animal daily. A hog in good health will extract the nutriment from a small quantity of corn or raw meal, daily, but if full fed he is unable to do it, and the food is only partially digested. The cooking assists digestion, and in some instances will make a difference of half the nutriment the food contained—that is, by cooking, the animal obtains the whole, whereas if the corn was fed whole and raw, only half the nutriment might be extracted.

Grapes from Seed.—J. W.—The *Boston Cultivator* gives the following as the best mode of raising grapes from seed. The writer says he has about 500 plants raised from 20 different kinds of grapes. "Save the seeds when the grapes are ripe; mark them, as it is desirable to trace the pedigree of a new fruit. Late in the fall, sow them in a rather light mellow soil, likea good garden, covering them about two-thirds of an inch deep. If sowing be delayed till spring, put the seeds into loam in the fall, or early in winter, and bury in earth, or place in the cellar, and keep gently moist which is best done by putting them in a tight stone or earthen vessel, covering the earth with damp moss or cloth, and placing in a close box or chest. It is less trouble to sow in the fall, especially where one has various kinds."

Churning Milk.—G. C. M., Greenfield, Mass.—We have no doubt that good butter is made by churning the milk, but we do not think it is the only way by which butter can be made that will stand tropical climates or long voyages. The Dutch and Irish butter has been celebrated for long-keeping, and that is generally made from cream, skimmed from the milk. We are not aware that there is anything peculiar in the process of churning milk. Large churns are required, and they are often worked by horse power. It is common to let the milk curdle or "lobber" a little before it is churned. O. C. Crocker, of Union, Broome county, N. Y., and John Holbert, of Chemung, Chemung county, are both noted for the fine quality of their butter, made in this way, and they would probably give any information in regard to their mode of manufacture.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Oct. 20, 1848.

FLOUR—Genesee per bbl. $5.37½a$5.56¼. Demand fair and market steady.

GRAIN.—Wheat, Genesee, per bu., $1.25—Ohio, $1.15—Corn, in moderate request at 72a73 cts. per bushel for round, and 67a68 for mixed.

BUTTER—Orange Co, per lb, 19c.—Western, dairy, 15a17c.

CHEESE—per lb., 6½a7c. In good demand.

BEEF—Mess, per bbl, $11—Prime, $6.

PORK—Mess, per bbl., $12.25—Prime, $10—dull.

LARD—in kegs, per lb., 7¾a8c.

HAMS—Smoked, per lb., 6½a9c.

HOPS—First sort, growth of 1848. per lb., 9a11c.

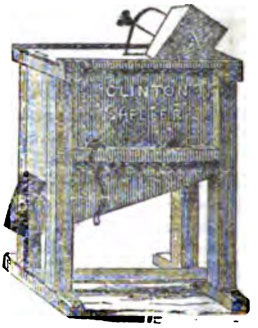
TOBACCO— per lb, Virginia and Kentucky, 2½a6½c.

COTTON—Upland and Florida, per lb., 5¼a7½c.—New Orleans and Alabama, 5a8½c.

WOOL—Prime or Saxon fleeces, washed, per lb...	35a40 cts.
American full blood fleeces,..............	31a33 "
" half blood,....................	26a27 "
" one-fourth blood and common,.	23a25 "

FOR SALE AT WHOLESALE AND RETAIL,

AT the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green st., Albany, by H. L. EMERY, the following machines:



Clinton's Improved Corn Sheller.

Warranted the best hand machine for the purpose in use.

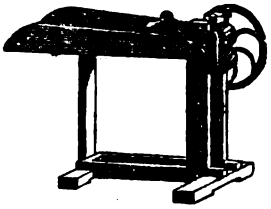
They are furnished with one or two hoppers, and are capable of shelling, with one hopper and two men, from 150 to 200 bushels ears per day; with the double hopper and three men, nearly double that amount may be done.

Price of best make, $10 & $13; ordinary quality, $7 & $9 each. The trade furnished on reasonable terms. The State Agricultural Society awarded to this Sheller their first premium in 1847.

Adams' Patent Wood Well and Cistern Pump.

A simple wood barrel and lead connection, for wells or cisterns, a neat and durable article, and a perfectly safe and tight connection, and warranted to give satisfaction, or may be returned within six months, at my expense, and purchage money, and expense of setting, refunded Rights of Counties and Towns for sale by applying to H. L. EMERY.

Pumps furnished to the trade at unprecedented low prices. Retail price, $5.

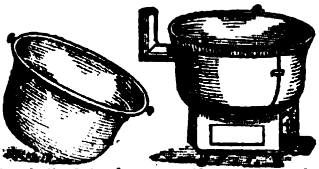


A large supply of Stevens' Spiral Hay Cutters, of all sizes, at wholesale and retail, at manufacturer's prices. Also a good assortment of Hovey's, Rich's, Tower's and Ruggles. Nourse and Mason's Cutters of all sizes, at manufacturer's prices.

When feeders of stock learn the advantages of using cut feed, saying nothing of the great saving by using up much of the coarser qualities of hay, corn stalks' &c., they will no longer be without a good hay or corn stalk cutter.

Wheeler's Horse Powers and Threshing Machines.

HAVING sold upwards of two hundred setts of the above celebrated Machines, and with unparalleled success, not having failed to give entire satisfaction in every instance, we call the attention of farmers again to it. They are subject to the following warranty, viz: "The purchaser himself being judge—may return them at my expense within three months, if not found fully to answer the description and purpose as stated in Catalogue, (which is furnished gratis at store or by mail,) and the purchase money refunded."



Mott's Agricultural Furnaces. A convenient and portable furnace and boiler connected, and so constructed as to admit the flame and heat on all sides of the boiler, there being a space of two to three inches between it and the shell of the furnace. Thus making it the most economical by saving of fuel, and convenient as it occupies but little space, and with funnel, may be readily connected with any chimney.

Prices, 10 gallons,	$7 50	45 gallons,	$20 00
15 "	9 00	60 "	23 00
22 "	12 00	90 "	35 00
30 "	15 00	120 "	50 00

MOBILE SEED STORE.

AGRICULTURAL and Horticultural Manufacturers' Agents, for the sale of

Plows, Straw Cutters, Corn Shellers, Harrows, Cultivators, Seed Planters, Water Rams, &c., &c.

The undersigned have been for many years devoted to the advancement of *Agricultural, Horticultural*, and other scientific pursuits, for which a taste is advancing in this State rapidly, and beyond any other period of its existence; and aware of the want of an Agent located in Mobile, in whose judgment in such matters, the citizens of this and the adjoining State, and the proprietors can have confidence, and who would take a direct and personal interest in furthering the introduction of approved *Agricultural* and *Horticultural* implements, tools and machinery, we are induced to open an Agency in this city, devoted to these branches alone. From our knowledge of, and acquaintance with the *Planters of Alabama* and *Mississippi*, we are enabled to offer greater inducements and facilities to *Patentees* and *Inventors* for the sale of their articles, than can be obtained elsewhere. We will open an exclusive

AGRICULTURAL AGENCY WAREHOUSE IN MOBILE,
SUITED TO THE SOUTHERN PLANTER.

Inventors and Patentees are invited to a correspondence (post paid) relating to Plows, Harrows, Rollers, Cultivators, Horse Powers, Grain and Rice Thrashers, Hulling Machines, Fanning Mills, Cotton Gins, and all other articles useful to Planters and Agriculturists.

It may be proper to add that the great Mobile and Ohio Railroad, of which Mobile will be the depot, will go on to a rapid and certain completion, and that this will shortly be a point inferior to none in the Union, for the sale of every thing connected with the vast interest of Agriculture in Alabama, Mississippi, Tennessee and Kentucky, and through the terminus of the Road at the mouth of the Ohio, with the "*Great West*," whose outlet this will be in a fair profitable rivalry with New Orleans.

We will make prompt returns of all business confided to us.

☞ Agricultrual Works received on commission

Mobile, Sept, 1848. S B. NORTH & CO.

Refer to:—Hon. John Gayle, Member of Congress; Messrs. Stewart & Eaton, Esqs.; J. G. Lyon, Esq., U. S. Marshal; Messrs. LeBaron & Son; J. C. Hodges, Esq.; Collier H. Minge, Esq.; Messrs. L. Merchant & Co., J. H. Rivers & Co, Robert Desha & Co., David Stodder, Esq; Luther Tucker, Esq., publisher "Cultivator" and "Horticulturist," Albany; Wm. H. Starr, Esq., Editor "Farmer & Mechanic," New-York; A. B. Allen, Esq., Editor "American Agriculturist," New-York.

Nov. 1.—3t eom.

Premium

GRAND ACTION PIANO FORTES,

With the Dolce Campana Attachment,

WITH or without the Metallic Frame, and containing every real improvement. Warranted in all cases to prove satisfactory, or purchase money promptly refunded, together with all expenses.

THE DOLCE CAMPANA ATTACHMENT is a new invention, for which the subscribers have secured letters patent—an improvement which combines more richness and beauty of tone than ever before attained in the Piano Forte. This instrument has always been regarded as of limited power, prior to those improvements by way of attachments, which are but recent inventions. the soft or harp pedal has been the principal one to vary the tone—but always objectionable by its marring the clearness of the vibrations of the strings, and to overcome which has been the great desideratum with the inventors of the

DOLCE CAMPANA ATTACHMENT,

And by which this great object is fully attained. It is controlled by a pedal, and produces similar qualities and expressions of tone unlike any thing heretofore known; and when combined with the other two pedals, produces the lightest shade of Altissimo notes, alternating with the crescendo and diminuendo, and other musical accents of any kind which may be desired, in perfect imitation of an orchestra performance. The particular qualities of this new attachment, are its clearness, brilliancy, and delicacy of tone, which falls upon the ear with a surpassing softness, like the chiming peals of distant bells,

"As they roll their notes along,
By brae and breezy burn;"

and hence its peculiar name, "Dolce Campana," sweet bells. This attachment is perfectly simple, and so constructed that it can be detached from the instrument in a few moments. It will not put the piano out of tune, or in any way effect it, except at the will of the performer. One of our Piano Fortes, with this Attachment. received the PREMIUM at the late great State Fair at Buffalo.

Those wishing to purchase a Piano Forte will do well to call and hear this new invention before they buy. A large assortment of Piano Fortes at various prices, 6 and 7 octaves, with Music and Musical Instruments constantly on hand.

BOARDMAN & GRAY,
Nov. 1.—1t.* Nos. 4 and 6 North Pearl, and 79 State-st., Albany.

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THE Subscribers are prepared to supply orders for Cast Iron Cider Mill Screws and boxes complete.

Also, Steam Engines, Mill Gearing, and Castings in general.

JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver Street, Albany.
October 1, 1848—2t.

SAXON SHEEP.

HAVING sold a portion of our farm, we shall reduce our flock, and now offer to sell, giving a selection from our entire stock of breeding Ewes and Bucks. We refer to

H. Blanchard, Esq., *Kinderhook Wool Depot.*
Samuel Lawrence, Esq., *Lowell*; and
The Editors of the *Cultivator.*

Letters addressed to us, New Lebanon, Columbia county, N. Y., will meet with prompt attention.

Nov. 1, 1848.—2t.* M. Y. & H. A. TILDEN.

WM. R. PRINCE & CO.,

PROPRIETORS of the Linnæan Garden and Nurseries. Flushing, offer their unrivalled stock of Fruit Trees of suitable size for Orchards, and 20,000 Pears, of bearing age, on the Pear and Quince.

APPLES, 390 varieties, among which are,

Early Strawberry, Early Harvest, Summer Rose,
Summer Queen, Large Early Bough, Benoni,
Maiden's Blush, Keswick Codlin, Drap d'or,
Fameuse, Porter, Gravenstein, Yellow Bellflower,
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Hubbardston Nonsuch, Swaar, Fall Harvey,
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Herefordshire Pearmain, Fall Pippin,
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American Summer Pearmain, Esopus Spitzenburg,
Green and Yellow Newtown Pippins,
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PEARS, 508 varieties, comprising,

Dearborn's Seedling, Madeleine, Bartlet,
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Beurre d'Amalis, Flemish Beauty,
Louise Bonne of Jersey, Duchesse d'Angouleme,
Glout Morceau, Beurre Bosc, Beurre d'Aremberg,
Winter Nelis, Lawrence, Columbia,
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Vicar of Winkfield, &c.

PLUMS, 170 varieties, comprising,

Imperial Gage, Washington, Purple Favorite,
Yellow Gage, Coe's Golden Drop, Smith's Orleans,
Bleecker's Gage, Duane's Purple,
Lucombe's Nonsuch, Purple Gage;
Ickworth Imperatrice, &c.

CHERRIES, 120 varieties, comprising,

Black Tartarian, Graffion or Bigarreau,
Black Eagle, Elton, Mayduke, Downer's late red,
Belle de Choisy, Knight's Early Black,
Downton, White Bigarreau, American Amber,
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PEACHES, 180 varieties, comprising,

Large Early York, Crawford's Early,
Crawford's Late, White Rareripe, Nivette,
Bergen's Yellow, Grosse Mignonne,
Oldmixon Free, Red Rareripe,
Cooledge's Favorite, Heath Cling,
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Early vnd Late Admirable, Oldmixon Cling,
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APRICOTS, 34 varieties, comprising,

Moorpark, Large Early, Boston, Violet Hative,
New White, Red Roman, Lafayette,
Hardwicke Seedling, Dubois Golden, Early Peech,
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NECTARINES, 28 varieties, comprising,

Elruge, Boston, Red Roman, Violet Hative,
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Also, Almonds, Quinces, Grapes, Figs, Pomegranates,
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ORNAMEETAL TREES AND SHRUBBERY, including, 30,000 Evergreen Trees, and Roses of 1,600 splendid varieties, Bulbous Flower Roots, Pœonies, Carnations, Hedge Plants, Vines, Creepers, &c.

Orders per mail will be executed with dispatch, and forwarded as desired. Nov. 1—1t.

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For sale at the Office of the Cultivator:

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The Cultivator—Price $1 a year. To Agents, seven copies for $5.—Fifteen copies for $10. Al subscriptions to begin with the volume, which commences with the January No. in each year.

The Horticulturist—Price $3 a year. Agents are allowed a discount of 20 per cent on all subscriptions they forward. Subscribers to the Horticulturist may commence with the volume in July, or with the half volume, in January.

☞ All orders to come free of postage, and to be accompanied with the money for the numbers ordered.

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Rockville, Dr. Munson
Rexford Flats. M. Sheldon
Rome, O. D. Grosvenor & Co.
Richfield Springs, Dr. H. Manley
Richfield. F. C. Shepard
Richmond, John Johnson
Ramapo, Steph. Sloat
Rossie, P. Butterfield
Rushville, P. Voree
Rock Stream, Peter McKey
Royalton, Jos. Chapin
Reynales Basin, A E. Chapin
Raymerstown, Chas. Derrick
Russia, Thomas Johnson
Salem X Roads, N. Fay
Silver Creek, D. G. Smith
Susquehannah, G. L. Doolittle
Summer Hill, E. Newton
Syracuse, Stoddard & Babcock
“ Hall & Dickson
Saugerties, E. J. McCarthy
Schenectady, Geo. Clare
Sennett, E. Sheldon
Salubria, E. Quinn
Schodack Landing, P. G Ten Eyck
Springfield, Geo. Clarke
Stephentown, N. Howard
Saratoga Springs, Jas. Stewart
South Easton, D Aldrich
Sprout Creek, John C. Shear
Stanfordville, M. J. Miller
Salt Point, D Griffin
Stormville, Benj. Hopkins
South Granville. C. Taylor
Sandy Hill, E. D Baker
Split Rock. Jas. Fortune
Salisbury Centre, A. C. Hopson
South East, J. O. Howes
South Amenia, H. Hitchcock
Stafford, S. C Thorne
Sing Sing, J. I. Kane
Sauquoit, D. Dunham
Somers, David Teed
Sterling, A. Watkins
Scott, T Harrop
South Richland, J. L Dickinson
Salisbury, E. W. Carryl
Stone Arabia, C. Snell
South Middletown, W. Hoyt
Seneca Falls, S Chapin
South New Berlin, A. Simons
Summit, O. Ives
Shrub Oak, L. Purdy, P. M.
Slaterville, L. Carter
South Royalton, E. Safford
Speedsville, L. W. Kingman
South Salem, Henry Keeler
South Livonia, O. Hastings
Scriba, D P. Wright
Sterling Centre. H. Crocket
Springville, H. H. Bloomfield
Southampton, B. H. Foster
Southold, M. C. Cleveland
Shelby, A. B. Moore
St. Johnsville, T Countryman
Schaghticoke, E. Congdon
South Hartford, S Cooley
Schuylerville, J F. Smith
South Westerlo, L. Stanton
Schoharie C. H., A. Gallup
Schuylers Lake, J. Hartshorn
Stuyvesant, B. Van Buren
Sidney Centre, S. L. Wattles
Stillwater, R. Merchant
South Hammond, Jas. Lambie
Sandy Creek. John Coulter
Stockbridge, D. H. Frost
Sacketts Harbor, S. L Hooker
Stockton, T. Rolph
Shawangunk, P. V. C. Miller
St. Andrews, Jas Todd
Sheldrake, Jos. R. Barry
South Corinth, Wm. Edwards
Sullivan, A W. Lee
Trenton, L. Guiteau
Towners, B. B. Benedict
Three Mile Bay, Wm. Dewey
Troy, L. Williard
“ W McKinney
Truxton. M. Miller
Tyre, J. Smith
Trumansburg, James McLallen
Triangle, W. Jackson

The Purchase, J. T. Carpenter
Troupsburgh, J Everett
Tarrytown. H. Sheldon
Taberg, H. G. Bloss
Towanda, Dan Butts
Trenton Falls, M. Moore
Unadilla, S G Cone
Utica, Wm. Bristol
" " D Redmond
Upper Red Hook, J. Rowley
Union Mills, F. Veeder
Victory, Jas. Wallace
Valatie, M. L. Prentiss
Vernon, Jas. Turner
Verbank, C. Coffin
Vernon Centre, E. M. Foot
Van Buren, C. H. Kingsley
Volney, E. Griffin
Verona, Geo. T. Peckham
Voorheesville, S. Ostrom
Wilton, Cyrus Perry
Watertown, E. S. Massey
Washington, J Winteringham
Washington Hollow, Wm. K. Coffin
Wappinger's Creek, J. Ingham
Warwick, Jno. R. Wilson
Westport, R. Stevenson
Waterford, D. B. King
White Plains, Jno. R. Sherwood
West Somers, Wm. B. Ferris
Walton, A White
Waterville, J M. Tower
Westmoreland, A. H. Halleck
West Point, Rich. D. Arden
West Galway, Geo. Ainslee
White Store, N. N. Greene
White Creek, S. Barker
Westville, Geo. D. Gaue
Watervliet Centre, H. Terry
Windfall, C. M. Brown
West Winfield, M B. Foster
Warren, H. Taylor
West Almond, H. McGibeny
Willett, R Greene
West Charlton, H Ostrom
Walden, John D. Kidd
Wilna, Z. Penniman
West Troy, C. W. Lawson
West Greenfield, H. Gardner
Wyoming, J. W. Paddock
Walworth, T. G. Yeomans
Westfield, E. C Bliss
West Milton, H. Van Ostrand
West Chester, S. B. Bowne
Wheeler, Gen. O. F. Marshal
Woodville, John Miner
Winden, J. P. Keller
West Leyden, A. Fox
Willink, A. C. L. Robinson
Windsor, Wm. Swagart
Wampsville, C. Van Cice
Whitney's Point, J. D Smith
West Walworth, H. T. Foskett
Williamstown, J. L. Humphrey
Windham Centre, P. Lewis
Wheatland, Col. J. Murdock
Westerlo, A. H. Ford
West Stockholm, G. A. Hanchet
Yaphank, H. J. Weeks
Yonkers, J. Bashford
Youngstown, Peter Tower

GUANO.

A Superior lot of Patagonian Guano just landing—put up in tight casks, thus preserving all the ammonia—for sale at two cents per lb, at the Agricultural Warehouse of S. C. HILLS & CO. 43 Fulton St., New-York. Oct. 1, 1848—3t.

LARGE STOVES.

THE Subscribers are making the largest and best Stoves in market for Dairymen, Planters, and Hotel keepers—to which their attention is invited. JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver st., Albany.
Oct 1, 1848—3t.

SOUTH DOWN SHEEP.

THE Subscriber offers for sale, several very superior Southdown Rams and Ewes, (from lambs to 4 years old,) some of which are imported animals.

Great care has been taken, and no expense spared to raise up this stock to a high standard. He has lately added to his former stock. several fine animals, many of which were selected personally by their former owner, from some of the most noted flocks in England

Applications may be made either personally, or by letter, addressed to J. McD. McINTYRE, Albany.
Oct. 1.—3t.

PLUM STOCKS.

THE subscriber offers for sale 100,000 good strong seedling Plum Stocks.

Messrs. King and Ripley, and other nurserymen who have used these plum stocks, prefer them to the imported or any other sort ever tried by them.

None less than 15 inches high will be put in.

Price $10 per 1,000—$90 for 10,000, delivered in New-York.

Also, a large collection of Fruit and Ornamental Trees, Grape Vines, &c. Apply to SAMUEL I. GUSTIN, Newark, N. J.
Oct. 1—2t.

TO NURSERYMEN, GARDENERS AND HORTICULTURISTS GENERALLY.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes by a faithful attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References —A. J. Downing, Esq. and A. Saul & Co., Newburgh; H. Reid, Murry Hill, N. Y., and Elizabethtown, N. J.

GEO. G. SHEPPARD,
113 Maiden Lane, New York.

N. B. Orders for Russia Mats, for Budding or Packing, immediately supplied.

New-York, Oct. 1, 1848.—2t.

NEWBURGH NURSERY—FRUIT TREES.

THIS Nursery contains a general assortment of fine thrifty trees, consisting of

Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Raspberries, Gooseberries, Strawberries, &c.,

Of the most approved kinds. Also many that are new and rare, of recent introduction.

All orders (post-paid,) will be carefully attended to by the proprietor—Catalogues sent on application.

CHA'S. DOWNING.
Newburgh, Orange County, N. Y., Oct. 1, 1848.—2t.

FRUIT TREES.

THE Subscribers are now ready to receive orders for superior TREES viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, &c, from their new nursery. Trees all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention.

WILSON, THORBURN & TELLER.

☞ Also, a fine assortment of choice varieties of the Pear on Quince stocks, or dwarf pear trees.

Albany, Oct 1. 1848—2t.

TO NURSERYMEN, ORCHARDISTS, AND PLANTERS.

THE subscriber offers for sale at his nurseries, Plymouth, Mass. Pear, Quince, Cherry, Plum, Apple, and Dwarf Apple, (Paradise) stocks, suitable for budding next August, or for Spring grafting. Also, the following ornamental tree stocks, from two to three feet high and stout: viz. Mountain Ash, Oak, Hawthorn, Elm, Spanish Chestnut, Horse Chestnut, Birch, Beech, Ash, Norway Maple, Sweet Brier, Larch, Scotch fir. (2 ft) Silver fir, (1ft.) Spruce fir, (1 ft.) Norway fir, (1 ft) Arbor Vitæ, (15 in.)

Also, 50 of the finest sorts of PEARS, standard and dwarf.

Priced list sent to post paid applicants.

Oct. 1.—4t. B. M. WATSON.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

Late A. J. Downing & Co.

THE undersigned beg leave to inform their patrons and the public in general, that their stock of

FRUIT & ORNAMENTAL TREES, SHRUBS, &c., &c.,

For Autumn planting, is unusually large and thrifty, especially PEARS, PLUMS and APPLES; of most of the standard varieties of the latter there are several thousand trees, three and four years old, of large size suitable for orchard planting, together with a general assortment of Cherry, Peach, Nectarine and Apricot trees. Also, Grape vines, small fruits, &c., &c.

Portugal Quince Trees, standard height, 6 ft,	$1 00
" " quenouille " "	1 00
Angers (*true*) " " " "	1 00
Smaller trees of the above, price,	0 50

Hedge Plants.

Buckthorn, 2 year old, per 1000,	$ 8 00
Osage Orange, " per 1000,	12 00

The ORNAMENTAL DEPARTNENT is full and complete; for particulars see Catalogue, a new edition of which is just issued for 1848 & 49, and will be sent to all post-paid applicants.

Orders respectfully solicited, and will receive prompt attention, which will be carefully packed and shipped to any part of the Union or Europe

N. B. Catalogues to be had gratis of the agent in N. Y, Geo. G. Shepherd, 143 Maiden Lane, and at the office of "The Cultivator," Albany. A. SAUL & CO.

Highland Nurseries, Oct. 1, 1848.—2t.

FRUIT TREES.

THE Subscriber now offers for sale at his nursery in Canterbury, Orange County, N. Y., a general assortment of Fruit Trees, embracing all of the most valuable varieties of fruit, with many that are new and Rare. And having obtained them all from the best sources, or from bearing trees of well known varieties, and proved a large proportion of them on his own grounds; and the budding and marking of all his trees being done with his own hands, assisted by his Son; and devoting his entire attention to fruit trees only, he believes them to be equally correct with those of any other establishment.

His stock of APPLES. embracing many thousands, is large and very thrifty, at $20 per 100.

Trees of small size for the Western States, at low prices.

With grafts of all the varieties at low rates.

See Catalogue, which will be sent to all *post paid* applicants.

Also for sale, 30,000 SEEDLING PLUM STOCKS, one year old, and 5,000 one year old BUCKTHORN PLANTS.

Canterbury, Oct. 1, 1848.—1t. CHARLES HAMILTON.

MERINO SHEEP FOR SALE.

HAVING arrived at a point in which I desire to reduce my stock of Sheep, I have therefore concluded to sell about 600 Merino Sheep this fall, which have been bred with great care, and are inferior to none in the United States—200 of which are half bloods, from the importation made by Mr. Taintor. Nothing need be said to recommend them, for they recommend themselves.

Cornwall, Sept. 1, 1848.—3t. A. L. BINGHAM.

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ANNUAL MEETING N. Y. S. AG. SOCIETY.

THE Annual Meeting of the N. Y. S A. Society, will be held at Albany on the 3d Wednesday. (17th) of January, 1849.

Premiums will be awarded on Grain and Root crops, Butter, Cheese, Fruits, &c Statements should be furnished the Secretary early in January. It is desired that there should be a full representation from the County Societies, as well as of the friends of Agriculture generally.

A *Pomological Exhibition* will be held at the rooms of the Society, and growers of fruit are respectfully requested to forward specimens to the Secretary, as early, if practicable, as the 15th of January.

B. P. JOHNSON,
Secretary.

Nov. 1, 1848—3t.

PERUVIAN GUANO.

FIVE hundred tons of genuine Peruvian Guano, fresh from the Chinche Islands, now landing from on board ship, for sale in lots to suit purchasers. Farmers will do well to be upon their guard of whom they purchase Guano, as much is sold under the name of Peruvian, which is *spurious* and almost entirely worthless.

PLOWS, &c.—Upwards of sixty different kinds of Plows, Harrows, Cultivators, Thrashers, Horse Powers, and Agricultural and Horticultural implements of great variety.

FIELD AND GARDEN SEEDS.—A complete assortment.

A Descriptive Catalogue of the above, of 100 pages, will be sent gratis to all who request it, *post-paid*.

Apply at the Agricultural Warehouse and Seed Store of

A. B ALLEN & CO.,
189 & 191 Water street, New-York.

Nov. 1—2t.

KINDERHOOK NURSERIES,

Kinderhook, N. Y.

H. SNYDER begs leave to inform the patrons of this establishment and the public in general that his stock of ***FRUIT TREES*** for sale for autumn planting, is large, comprising all that is choice and rare, of recent introductions; as well as a full and large assortment of all the leading standard varieties. Also

100,000 *Seedling 2 yr. old Apple Trees*, $5 *pr.* 1,000,
10,000 *Plum Seedlings*, 1 *yr old*, $10 *per* 1,000.

Also, English Hawthorn, Buckthorn, Privet plants, Arbor Vitæ, for screens and hedges

Ornamental trees, of extra size, suitable for streets or lawns, consisting of

Elms, European Lindens,
European Mountain Ash, Maples,
European Larch, Norway Spruce, Firs,
&c., &c.

A good collection of flowering shrubs and greenhouse plants, including many of the most brilliant Roses of new and rare kinds.

Catalogues and information by letter, furnished on all *post paid* applications; and trees securely packed so as to be sent with perfect safety any distance, by railroad or otherwise.

Nov 1, 1848—1t.

SCHOOL OF APPLIED CHEMISTRY,

Attached to the "Department of Philosophy and the Arts," in Yale College.

B. SILLIMAN, Jr, Professor of Chemistry and the kindred Sciences applied to the Arts.

J. P. NORTON, Professor of Agricultural Chemistry.

THE Instructors in this department have opened a commodious laboratory on the College grounds, where they are now prepared to receive pupils in special and general chemistry The system pursued with those who design to become chemists or to study the science extensively, is thorough and complete Such students always commence with an extended course of qualitative examination of unknown substances—and in due time pass through a series of varied quantitative determinations To those who wish to follow special investigations connected either with the arts, agriculture or pure science, every facility will be afforded, both in organic and inorganic analysis.

PROF. B. SILLIMAN, Jr., will instruct particularly in general elementary and analytical Chemistry, Mineralogy and Metallurgy, with special reference to their application to the useful arts He will also give a course of lectures on Mineralogy and Metallurgy, continued through the summer term. During the fall and earlier part of the winter, he will also carry a class through a course of elementary Chemistry, in elucidation of the regular course on this subject in the Academical department.

The instruction in the professorship of Agricultural Chemistry is intended to unite, as much as possible, practical views with theory; to give the untaught farmer an opportunity to become acquainted with so much of science as shall enable him to reason upon his daily pursuits, and to understand the great principles upon which good cultivation must depend, presented in so plain a form as to be within the comprehension of all. Few chemical terms will be employed in the lectures, and those only of the simple explanations; they will thus be understood by those who have never devoted any attention to the subject. A regular course of lectures will be delivered in the winter of each year, commencing in January and continuing about two months, there being four lectures in each week. The subjects of the course will be—the composition and nature of the soil, the plant, and the animal—theories of rotation of crops, and of feeding—modes of draining—the different kinds of manures, their value and how beneficial—the improvement of waste lands, &c. &c Text-books will be indicated for study during leisure hours.

In connection with the lectures, will be a short course of elementary Chemistry, for such as wish to study somewhat more of chemistry than is given in the course, and to qualify themselves for making ordinary testings and qualitative examinations of soils, manures, &c.; this course will occupy two hours of five days in each week during two months.

The fee for the Lectures on Agricultural Chemistry will be $10. That for the Elementary Chemical Course, including apparatus and reagents, will be $25.

Students in Analytical Chemistry are allowed to work in the laboratory during the whole day; glass will be furnished, (with charges for breakage,) also the ordinary reagents and balances for the use of those who are so far advanced as to require them. There will be frequent recitations, and the students will receive the constant attention of one or both of the professors. The fee for this class will be $20 per month.

The vacations will correspond with those in the Academical departments, viz:—six weeks from the third Wednesday of August; two weeks from the first Wednesday in January; and four weeks from the third Wednesday in April of each year. Sessions begin with the close of each vacation, and are in length respectively, 14—14 and 12 weeks.

Students in this school will enjoy all the advantages to be derived from the extended means of the institution in Libraries, Instruments and Collections. The Mineralogical and Geological collection is widely known as one of the best in the country, and there are smaller collections in the possession of the Professors. Those who desire it can have access to the Lectures on Chemistry, Mineralogy and Geology, by Prof B SILLIMAN, Senior, and to the Lectures on Natural Philosophy, by Prof D. OLMSTED.

Instruction is also accessible in higher Mathematics, in Engineering and the use of Instruments, in Philology, History, Oriental Languages, and Belles Lettres.

The department of Philosophy and the Arts in Yale College, of which the School of Applied Chemistry is a part, has been organized with a view to meet the wants of those who desire to follow the studies embraced under it further than they are pursued in a collegiate course. Those who desire further information on this subject, are referred to the annual catalogue of the Institution for 1847, '48.

A college education is not however required of those who become students under this department.

The Professors are always accessible to those who wish to consult them on matters relating to their several departments; and will undertake such analyses as may be entrusted to them. Letters of inquiry will be promptly attended to.

Analytical Laboratory, Yale College, New Haven, Nov. 1848.—2t.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

THE CULTIVATOR.

NEW SERIES. "TO IMPROVE THE SOIL AND MIND."

VOL. V. ALBANY, DECEMBER, 1848. No. 12.

CLOSE OF THE YEAR---THE CULTIVATOR FOR 1849.

THE present number completes the fifteenth volume, (the fifth of the new series) of THE CULTIVATOR; and we avail ourselves of the opportunity to tender our thanks to the numerous friends who have so liberally aided us in our past labors. We trust that the acquaintance, which, with many of our readers, has existed from the beginning of our work, has been mutually beneficial; and we have reason to hope that the connexion will be continued with the same advantages as have heretofore been experienced.

We regret to be under the necessity of informing our readers, that since our November number was sent to press, our office has been destroyed by fire—a circumstance which caused a delay in forwarding a portion of that issue. The fire broke out at about half past 12 o'clock on the night of the 28th of October, in the store of Mr. D. Harris, adjoining Mr. EMERY's Agricultural warehouse, in which was the office of *The Cultivator*. There being only a wood partition between the stores, both were soon enveloped in the flames, and entirely destroyed. Mr. EMERY's loss was nearly $6,000—$4,000 insured. Our loss was about $5,500 on which there was an insurance of only $1,150—leaving a total loss of over $4,000. Among the property destroyed, was 2,600 bound vols. of The Cultivator, and nearly all the back numbers of the current year, not more than twenty sets being saved. All the engravings used in The Cultivator, from its commencement, with the exception of some few loaned out, were also burnt. We have, however, all things in readiness, and shall go on with our publications, "*The Cultivator*," and "*The Horticulturist*," as usual, for both of which we solicit the kind offices of our friends.

Our next volume will be commenced on the first of January, 1849, under circumstances equally as favorable to the character and usefulness of the work, as have ever before existed. Our facilities for rendering the work in which we are engaged, a valuable medium of general communication for American farmers, may be understood and appreciated by those who have been familiar with its pages. To say nothing of the editorial labors, it may be safely asserted that no agricultural work in this country has ever possessed a correspondence of half the extent of *The Cultivator*—several of the last volumes having embraced the contributions of upwards of *three hundred* individuals, most of whom are practical farmers located in different sections from the British Provinces to the southern confines of of the United States. The mass of facts and interesting information that is annually collected by communications from so many intelligent minds, all engaged in the same pursuit, cannot fail to be regarded as of great importance; and considered in connexion with other obvious advantages, we think will place the Cultivator *prominently* before the public.

We would call attention to the *List of Agents* published in our present and last numbers. We hope all will use their efforts to get up larger clubs than heretofore, in their respective neighborhoods. We shall gladly avail ourselves also of the aid of any persons who may be disposed to use their influence for the circulation of our work.

Truly grateful, as we certainly are, to all who have heretofore so promptly lent us their aid, by raising clubs of subscribers annually for *The Cultivator*, we beg leave to ask their renewed and increased attention to the subject at this time. It cannot be doubted but that the circulation of our paper might with suitable effort, on the part of our agents, be doubled the next year. We have offered, in the *List of Premiums* for subscribers to our next volume, (for which see last page of this paper,) inducements which we trust will cause greater exertion than has heretofore been made, to promote its circulation. The premiums amount in all, to over TWO HUNDRED AND FIFTY DOLLARS.

December will be found a favorable month to obtain subscribers. The travelling is generally good, and the farmers, having now secured their crops, can enjoy the favorable opportunities thus afforded by the long evenings for reading and study. How can a portion of their time be better devoted than by an interchange of ideas, through the medium of such a paper as The Cultivator, on subjects involving, in so high a degree, their best interests? Is there any one among the thousands who have read the last volume of our paper, who does not feel convinced that he has been benefitted by the matter it contains, to ten times the amount of its cost?

CONNECTICUT FARMS.

Having had an opportunity the past autumn, of passing through a portion of Litchfield county, Ct., we submit a few remarks in relation to some of the farms we hastily examined.

The general surface of this county is much broken, a large part being hilly or mountainous, and the soil, in many instances, naturally rocky, cold and wet. These characteristics mark it rather as a grazing, than a tillage district; and we, consequently, find that the principal agricultural products are butter, cheese, wool and cattle. The rarity of plowed fields and grain crops, strikes the attention of the traveller accustomed chiefly to arable farming, as a novel circumstance, and might lead to an unfavorable conclusion in regard to the advantages of the section, and the condition of its rural population. But though limited in the variety of their agricultural productions, we are convinced that there are few neighborhoods where the farmers, generally, are in more independent circumstances than here; which shows that there are facilities for prosecuting certain branches of husbandry advantageously. The moist and stony soil—even where it is impervious to the plow—readily produces grass, and affords pasturage to sheep and cattle. The smoother and better parts of farms are reserved as meadows, and furnish hay for wintering the stock.

The section is susceptible of great improvement by draining. Much of the land on the large swells is naturally too wet, even for grass--many places producing only coarse, aquatic plants, and others a less nutritious herbage than might be grown if the soil was properly drained. The sloping position of the land renders its drainage comparatively easy, and in many situations, plenty of stones for filling the drains might be taken from the fields, and with decided advantage as to their fitness for tillage.

We believe that improvements, by drainage and otherwise, may be undertaken in this section with every prospect of success and profit. The trials which have already been made, as well as all the circumstances bearing on the case, clearly indicate this. With the advantages of a ready market, and good prices, for every description of produce, which are here offered, we should anticipate a better remuneration for judicious expenditures in improving these lands, than from agricultural operations in the "far west;" and we think a proper appreciation of the whole subject cannot fail to check the tide of emigration.

We are happy to say that a spirit of improvement is evidently awakened among the farmers of this neighbornood, and it is to be hoped that they will persevere, as they have every encouragement to do, in the good work they have begun.

The southern part of the county is less elevated than the central—or about Goshen and Litchfield—and is much better adapted to the general purposes of agriculture. Though hilly, the aspect is generally pleasant, and the scenery often fine. Watertown, adjoining the line of New Haven county, embraces a tract of good land. Grass is the principal product, but good crops of Indian corn, rye, barley and oats are raised, and apples, pears, peaches, and other fruits are readily obtained. Lands in this neighborhood have greatly risen in value within a few years. Farms which, only twelve or fifteen years ago, would scarcely sell for fifteen to twenty dollars an acre, will now bring thirty-five to fifty dollars. This advance has been caused chiefly by the enterprize of a few individuals, who, by their well-conducted improvements, have developed the actual resources of the soil, and displayed the results of judicious husbandry.

We saw in Watertown many farms which presented gratifying evidence of the good management and thrift of the occupants; though from the shortness of our visit and the unfavorable character of the weather, we were prevented from making more than cursory observations.

The farm of John H. Nettleton consists of 200 acres. It received the first premium as the best cultivated farm in Litchfield county in 1844. It lies mostly on the eastern slope of a large hill. Previous to its coming into the possession of the present owner—about fifteen years since—much of the tillable portion had been "hard run," and was given up as "worn out" and good for nothing. The whole farm would support but little stock, and produced no crops that paid the expense of cultivation. Mr. N. immediately commenced improvements. He dug out the loose stones, blasted rocks and built walls; made drains, subdued alders and other shrubs; then plowed the cleared and drained parts, sowed grass seeds, and top dressed with plaster. The reclaimed lots soon yielded large crops of grass, and enabled him to commence keeping cattle and sheep. He has now gone over more than a hundred acres, a great part of which is brought into what may be called permanent meadow, and is, notwithstanding its former roughness, so smooth that the scythe readily takes the whole crop. The mowing grounds are sometimes—say one year in three or four—pastured with sheep, which tends to thicken the sward and keep out wild plants, and this course, with occasional light top-dressings of plaster and manure on the poorer parts, keeps up the grass, with no diminution of quality or quantity.

The usual stock of the farm is thirty head of cattle two hundred sheep, and five to six horses of different ages. The cattle are high-grade Devons, which are found to do well for all purposes. We noticed several handsome cows, and a bull—the latter we believe took the first premium at the late show of the county. He is of remarkable bulk for his frame, and one of the strongest-made and most muscular bulls we have ever seen.

The flock of sheep has been noted as a good one for several years. The wool is of excellent quality for Merino, and the average weight per fleece over four pounds, washed. Mr. N. has exhibited rams at some of the shows of the New-York State Ag. Society, which have been commended by good judges.

Mr. N.'s buildings are well designed His dwelling is a good specimen of a farm house—sufficiently spacious, neat in appearance, and comprising all the conveniences and labor-saving appurtenances which intelligent Yankee men and women so well know how to provide. Owing to the difficulty of conveying heavy loads over a hill farm, especially in spring while the ground is soft, Mr. N. has erected several barns—five in all—in such situations that the hay may be stored, and the manure carried out with as little labor as possible. The stock is wintered at the different barns in such divisions or lots as is found expedient. Each barn is provided with water, either by an aqueduct or well.

The fences are principally walls, the stones for which as before mentioned, it was necessary to remove before the soil could be occupied to advantage. The fields are handsomely divided, and the straight lines of heavy wall, make an imposing appearance.

The farm of Jacob N. Blakeslee, Watertown, consists of about 200 acres, in addition to which he has 100 acres in a farm where he formerly lived. The career of Mr. B. affords a good example of the successful "pursuit of" farming "under difficulties." He began the world without a cent's aid from any body; commenced on a rocky, side-hill farm, for which he ran in debt. Here he toiled for upwards of twenty years, gradually lessening his indebtedness, and constantly improving his farm; till in 1836, he purchased the place where he now resides, by which he incurred a debt that might have frightened one of less judgment and courage. But to him the way appeared plain, and the result proved the clearness of his foresight. He has eared a large family—most of which are comfortably ettled in the vicinity—has greatly enhanced the value f his farm, by various improvements, and has nearly leared it from the incumbrance of debt.

His principal products of sale have been cattle, horses, heep and wool. He now cuts from 100 to 150 tons of ay annually—keeps fifty head of cattle, two hundred heep, and six horses. Eight of his cattle are full lood Devons, and the rest are from half to fifteen-sixeenths of that blood. He has twelve yoke of oxen and teers, most of which are fine, several *extra*. His sixear old oxen, three-fourths blood Devons, received the rst premium on working oxen "raised by the owner," t the late show at Litchfield, and have since, (we learn) een sold for $150, to go into the navy yard at Brookn. They are splendid cattle, well broken, and of reat vigor and power. Several of his cows, heifers, and ther young stock are fine.

Mr. B.'s flock of sheep has been widely known for any years. His home flock is now less in number than sual—he has kept 400 to 600. He commenced this ck in 1815, by the purchase of some Negretti and ontarco Merinos, imported by Peck & Atwater of ew Haven. This stock was bred together till 1823, hen it was crossed by rams bred by Daniel Bacon, of e Escurial, crossed on the Merino stock imported Gen. Humphreys in 1802. Since 1828, Mr. B. has ed only rams bred by himself. The present condition d character of his flock does him great credit. The ep are in general of beautiful form, with white, soft stic wool, ranking next to Saxon in fineness, and afding a large weight per fleece, in proportion to the size the sheep, which are rather small compared to some rinos. We are not able to state the precise relative ight of the fleece and carcass—the former weigh m four to five pounds each, washed.

Mr. B.'s improvements on his farm, consist in drain- the wet portions, digging out stones, smoothing the gh places, and building walls, of which he has two usand rods—much of it very thick and substantial.

Mode of raising orn.—We noticed that Mr. B., well as Mr. Nettleton and others in this neighbord, adopt a mode of plowing their land for corn ich we think well of, where the land is cold or wet. o furrows are turned together, in the form of what sually called "back-furrows," just so that the edgwill nearly touch. This is commonly done in the , and the corn is planted at the proper time in the ng, in the centre of the ridge, or between the edgf the furrows. If manure is used, it is spread on sward, and the furrows being turned together, it is t within reach of the corn roots, while the extra mth which the soil from its position receives, causrapid growth and gives a surer and better crop in y situations than could be had by the ordinary mode lowing. We saw a good crop—at least forty bushto the acre—at Mr. Nettleton's, raised in this way without manure, on a high hill, heretofore used as a pasture.

We made very short calls at several other farms in this vicinity, but had not time to gather particulars. Mr. Heminway, the obliging agent of the *Cultivator* at Watertown, has a small, neat farm, remarkable for the production of grass. A portion of it is much benefitted by irrigation. Being engaged in trade, he is obliged to make agriculture rather a secondary than a primary object.

Stephen Atwood, has a fine farm of 300 acres, lying partly in Watertown and partly in Woodbury. This farm received the first premium from the county agricultural society the present year. Mr. A. was absent at the time of our call, on which account we obtained but little information in regard to the products and management. The appearance of the farm is highly favorable—the buildings well planned and in excellent order—the fences good—the fields smooth and handsome. The farm is well stocked with fruit trees. The apple orchard is large, the trees flourishing, and the varieties good.

His cattle comprise some good specimens of the Devons, and several handsome grades. He has some good Merino sheep—about seventy in the whole flock. They are strong, well-made sheep, rather large, and yield heavy fleeces, of medium quality. The wool is thick, and highly charged with yolk, but we presume gives a good staple for manufacturing, when it has been properly cleansed.

The farms of George F. Merriam, Dayton Mattoon, Edward Hicox, (the latter having taken the first premium in the county several years since,) Chas. Atwood, James Garnsey, Andrew S. Darrow, and Chandler Judd, all exhibit creditable management, and show that the owners are awake to their true interest. Their practice is evidently based on the principle that the land should be improved, not deteriorated, if the greatest ultimate profit is to be secured.

Education of the Young for Agricultural Pursuits.—Where an ardent thirst is begotten in the minds of youth, to become thoroughly prepared for an honorable and useful discharge of the active duties which make up the sum of a happy life, the great first step is taken towards the accomplishment of so glorious an end. We turn our attention to parents, the natural guardians of the young, possessing power to mould and fashion the tender mind, to lead and direct aright the early inclinations as they are first developed. To parents we appeal, assured that their influence will be exerted, to lead the children under their care to contract an attachment to the employment in which they are engaged. Let the son be thoroughly instructed in every branch of labor to be performed upon a farm, and in its management in general, and no doubt, with proper opportunities for instruction from suitable books and well-regulated schools, he will fall in love with the science, and delight in the practice of agriculture. In the successful prosecution of this highly honored and peaceful pursuit, female effort and influence are indispensable to lead to auspicious results. I am aware that some persons of near-sighted and contracted views, have expressed the opinion that the female mind ought to be occupied altogether in the contemplation of unreal things, of ideas that float in a feverish or excited imagination, and of outward accomplishments, and be content to dwell upon the surface of subjects, without an attempt to dig deep in the mine of knowledge. No one honored with the title of mother, can for a moment listen to any such suggestion; but will, I am sure, put forth their utmost exertion for the fullest expansion and enlargement of the intellectual and moral capabilities of their daughters as well as their sons.—*Mr. Ives' Address before the Jefferson Co., N. Y., Ag. Society.*

AGRICULTURAL SCHOOLS.

Although much has been said and written on the subject of agricultural schools, we presume a vague idea only prevails in the minds of many, in regard to the proper system on which such institutions should be based, or what courses of study and instruction should be there pursued, in order to confer practical benefits on the pupils. Too much weight and importance appears to have been given to the inculcation of abstract theories, which, however correct in themselves, could not be used by the student in a profitable manner, without a thorough acquaintance with the manipulations in which their applications were involved. Perhaps the ill-success which has attended several attempts to establish schools of this kind in this country, is in a greater degree attributable to the want of a proper combination of "science with practice," than any other cause. We are informed that similar failures attended the first efforts of this kind in Europe. Even in Germany and Prussia, where the practical utility of such institutions is now almost universally acknowledged, they could not be made to succeed till the system of instruction was made to comprehend a thorough knowledge of all facts and operations on which the *profit* or *loss* of farming depends.

Attention to the subject, by able and practical minds, soon ascertained the root of the evil and devised the remedy. "They found," says one familiar with the course of agricultural education in Germany, that "it was the practical knowledge which had been wanting, to enable the farmer to construct an effective machine which increased its speed in proportion as the oil of science was added. Thus it was proved that neither science nor the thorough understanding of any *single* branch of agriculture (as breeding cattle or raising a fine crop) was enough to insure the ultimate object in view. For this, was required the knowledge of every branch, separately as well as collectively, the knowledge of calculating and securing combined results; how to estimate the cost of manure, and how to employ it to the highest advantage; to calculate the amount of cattle, the food necessary to produce the required quantity of manure for the rotation adopted; and a number of like practical questions, which must be understood by all those who wish to till the land with profit. A completer science showed that farming was more intricate than was first supposed; that it requires a regular study like all other pursuits, and this led to the idea of establishing proper agricultural schools, wherein all the sciences which bear upon agriculture, and all the practical branches separately and in connection with others; in a word, *the economy of farming* should be taught."

There are now several such agricultural schools in various parts of Germany. The young men there educated, are employed as professors for other schools, as directors for large estates, or they carry on farming for themselves; and in all these relations, the practical advantages of their education and training has been evinced.

Mr. **Fleischmann**, to whom we are indebted for the remarks we have quoted above, informs us that in some of the German states, pupils of the various schools are publicly examined under the direction of societies consisting of owners and superintendents of estates—the object being to ascertain the qualifications of the young men for the successful management of farms. Mr. F. attended one of these examinations, at which sixteen pupils, of from 16 to 23 years of age from various schools, were present. He has given in the Report of the Com. of Patents, for 1847, the following account of the examination. If the pupils could answer, properly, all the questions here given, their knowledge of the details of husbandry must have been very perfect.

After the necessary preliminaries, the pupils were required to answer a number of questions in writing; after which they were taken to an estate called Rosenthal (Rosendale) near Breslau. In the yard, the pupils were shown a wagon, which was marked on thirty-six parts; a plow, on thirty-five parts; a hacken (a kind of plow or cultivator) in five; a harrow on six parts, making eighty-two separate parts. Each pupil had to put down on paper the name of each part, as they were marked, to show whether he was acquainted with all the parts of the implements. After that, they had to show their skill in taking apart and putting together implements, and in case of breakage, to mention the most efficient way of repairing, &c. A sheep was then brought forward, and they were required to set down on paper, the answers to the following questions:

1. Is this sheep healthy, and why?
2. How old is this sheep?
3. How is this age called in the shepherd language?

Each one was next required to catch a sheep himself and examine it, whether it had the foot rot, and describe what are the signs of the foot rot. They had also to point out upon a sheep the places where the worst wool grows and on which place the best: To point out the places where the faults of wool are most liable to be inherited.

Several head of cattle were now brought before them and the following questions propounded:

1. How much milk can a cow of this breed give, when fed with grass or other green fodder—how long since she had a calf?
2. How many pounds of fodder does a cow of this breed reqnire per day, during the summer?
3. How much during winter, and the cost?
4. How many calves has this cow had?
5. How old is this cow?
6. What breed, and why do you say so?
7. How much will she weigh?

They are then called upon to estimate the probable amount of meat and fat, by examining the animal in the customary way of butchers. After that they were examined upon horses: the horses were first examined by the pupils, and the following questions required to be answered:

1. What are the peculiar qualities of this horse as a plow horse?
2. Which of these qualities are requisite for a good plow horse, and which are not?
3. How old is this horse?
4. Several places were pointed out to the pupils, and they were asked what kind of disease affects this part and that part?
5. What are the names of the different parts of the hoof, and where are those parts?

The pupils were now conducted to the barns, where they had to show their skill in making straw bands, in cleaning grain, &c., in sowing grain, &c.

After this, the pupils were taken to the fields, first to one of a light soil, and afterwards to one of a heavy soil, and the following questions were put to them before a fresh parcel of soil just dug up:

1. What is the name of this kind of soil?
2. What are the names of the principal parts of which this soil is composed?
3. What is the name of the subsoil?
4. Is the subsoil retentive or not?

5. What kind of crop succeeds the best on this kind of soil?

6. How large would you make the beds on such a soil? and why?

7. Is this heavy or light soil, cold or warm?

The same questions were asked as to another kind of soil at a different spot. The pupils returned and gave from their notes the required answers.

The questions which they were obliged to answer in writing, were as follows:

I. In the case of a heavy soil, sown with wheat and oats, and in that of a light soil sown with rye,—state for every month.

1. How much plowing and harrowing has to be done?

2. With how many horses or oxen?

II. How much manure will you require for it, expressed in loads? Do you call that heavy or light manuring?

III. How will you treat the manure in the stable, in the dung-hill and in the field?

IV. When you have at command Jauche, (drainings of dung-hills,) and mineral manure, how and for what crops would you use them?

V. What kind of weeds appear in the summer and what kind in the winter crops?

VI. And how will you destroy them when there are such?

VII. How can you prevent these weeds from coming up?

VIII. You have good and bad meadows—to what kind of cattle will you give your best, and which the worst kind of hay?

1. In the naked fallow, suppose that there is planted rape after clover, from which one cut was taken, let there be sown wheat. After peas, let there be planted potatoes—ten acres for each kind of crop:

The required work for each kind of crop to be done in two days?

How much labor of cattle is required in every period?

2 A field of twenty acres is to be manured with eight loads per acre, about the month of June: The field is 1000 paces from the farm yard: All must be done in five days: The manure must be strewed in three days:

How much labor of cattle and hands is required?

3. A meadow of middling quality, of thirty acres, must be mown in two days; the grass must be immediately spread; when dry, it has to be brought home in a lay, about two miles from the yard. How many span of working cattle and labor of hands, how many men and how many women are requisite?

4. The crop of a rye field of twenty acres must be rought home in two days. How many laborers

(*a*) To make straw bands?
(*b*) To mow?
(*c*) To gather and bind?
(*d*) To bring together and for loading?
(*e*) To bring to the barn?
(*f*) How many span of oxen or horses to haul it?

5. The crop of ten acres of wheat, oats and barley, ust be threshed in nine days and taken to the market, a miles distant. How much labor, &c., of men and imals?

6. In a heavy soil there shall be made in two days, a itch of three feet depth, three feet wide at the top, e foot at the bottom, three hundred yards long; how uch does it cost per yard and how many hands must set to work?

7. A meadow of good quality, of twenty acres, about ro miles distant from the farm yard, must be mowed one day—if possible, dried in three days; the hay ust be brought in, in half a day and stacked: How many persons and teams are necessary; and what is the probable crop from such a meadow?

To show their skill in making reports and other statements in writing, the following subjects were given:

1. A superintendent reports to his superior an accident on the estate, and describes the necessary steps he has taken.

2. The superintendent gives a written order and instructions to the overseer of the farm.

3. The superintendent makes a weekly report on the income and expenses of the grain, and for seed, fodder consumed by the cattle, on an estate where there are kept sixteen servants, twelve horses and eight oxen.

The next day, the 7th of September, the result of the examination was made publicly known. For this purpose, the board of examiners, the pupils and the audience assembled at the university, and the following statement was made:

That most of the pupils showed skill in the practical manipulations; but that by some, not only skill, but thoroughness was wanting. They were then admonished on the requirement of these practical manipulations in the farming operations.

The trial, as to the names of the parts of the implements, as well as the remedy when broken, &c, was declared not satisfactory; that a better knowledge of the parts of such implements with which the farmer has every day to work, is required and expected.

In the examination of soils and the best kinds of crops for them, the pupils showed considerable knowledge and correct views, but the knowledge in sheep breeding was rather slight; they showed more experience in horned cattle, and the most in their judgment of horses.

In the examination on the culture of crops, they proved well experienced; less so in that of herbage and fodder; had little knowledge in the value of a substitute for fodder, but were entirely deficient in the *economy of farming*, and showed a want of judgment in the quantity of force required for certain labors. The study of this important branch was recommended to their special attention, to acquire a correct knowledge of the amount of labor required for agricultural operations, in order to economize the most important capital, time, which can never be replaced.

The report upon the result of this examination, was very independent and honest. It was not like those of institutions of education, where the principal and teachers train the pupils, in a certain set of questions, to astonish the audience on the day of exhibition, when they publicly deceive, as to the high qualifications of the pupils, in order to increase the patronage of their manufactory of learned boys and girls, defraud the parents of their money, the children of their most precious time, and force upon the public a set of ignorant, conceited pretenders, who, instead of adding to the progress of things in general, retard it. This examination would have sufficed in many other places, and the pupils would have been crowned with laurels; but here, the examiner wished not to recommend a young man for a place, when he was convinced the pupil would ruin his employer, and injure the reputation of his teacher and the society.

At the close of the president's practical remarks, it was stated that it was the object of the association to ascertain what the young culturist has acquired during his practical studies; that a higher practical knowledge is required to become a director of estates, and that can be best accomplished by travelling. Further, that it had been hitherto the belief, that every simpleton could be a good agriculturist, and when every attempt failed to get him along in the world, the farming business was looked upon as the receptacle of all family prodigies of dullness. Of this error, the bad effects were every where visible. It was proposed to the general meeting, to take under consideration the establishment of proper agricultural schools for the less wealthy.

After the close of the examination, a discussion was held on the question, "Are institutions necessary in which a young man can acquire all practical knowledge?"

This question was ably debated by the professors of agriculture. It was thought that the separation of the theory from practice was injurious—both must be combined. Professor Schweitzer of Tharand in Saxony, thought that both can be acquired separately; he recommended that practice should be first learned, and theory afterwards—that the young man should have obtained a good common school education before he undertakes the practical study, and should afterwards finish his scientific education at an agricultural school. Thaer (the son of father Thaer,) demanded also a thorough elementary education, and then the learning of all the practical manipulations. These practical institutions, he thought, should not be too extensive, so that the owner may a tend to the whole himself.

THE RIGHT OF PROPERTY—In What does it Consist ?

In different sections and by different individuals this question will probably call forth different answers, as the tastes, habits and interests of those concerned shall dictate. Thus the merchant will say, *my* property is vested in stock, goods, cash on hand, and debts due. These I invest in such a manner as shall promise the quickest and best return. I am careful in small things in the management of my concerns. A yard of tape or an ounce of nutmeg, I usually turn to a profit of from 100 to 200 per cent. If a villainous scamp takes one or the other of these articles from me, he wrongfully takes away my property, is guilty of larceny, and punishable by the law of the land. I must enforce this punishment, not only for my own safety, but for the good of community, whose interests are always in jeopardy by having a thief at large among them. It is not so much the value of the thing I contend for, but the principle. *I bought the article; it was mine*, and if small things are not safe, large ones will soon be missing, I know not to what amount. Very good, Mr. Merchant, you are right, and we will gladly help you catch the thief.

Take the physician or the lawyer; say to one, you are unwell to-day. He will advise you to a simple prescription, or perhaps give you a trifling amount of medicine, or inquire of the other respecting some trifling point in law. You have in both cases taken counsel, and probably in both cases a fee will be required for a detention of three minutes, which might otherwise have been spent in fruitlessly discussing politics or perchance in asking you some question of no importance to any one. Why is this? You have taken *professional* counsel; their professions are their property, they must live by them, after having spent money for instruction and years in studying their mysteries. This, too, is right, beyond question or dispute.

The mechanic has a similar plea. He spent an apprenticeship of time in getting his trade, and his stock is property acquired by purchase. In this he must see his money refunded, and for his present time, and that which was spent in learning how to do the things you wish to have done, he must have compensation, for he too must live, and setting a patch on your shoe, or sewing a buckle to your harness, things inconsiderable to look at, he must be rewarded. Very right that he should be, for the reward is his honest due.

But how is it with the farmer? He, too, if he would succeed in his profession, must study, for ignorance shows her folly in cultivating the earth, if she does any where; he must have his cash capital invested whether he purchases, hires or takes on shares, as much as the merchant or mechanic; his time and his education are as much his living, as are those of the physician or the lawyer. He probably owns his farm, as most of our American cultivators do, and has a clear deed of the soil, "with all the privileges and appurtenances thereto appertaining," *to* be held by himself, his heirs and assigns forever, free and clear of all encumbrances whatsoever. Now the question is, is this land so purchased and so deeded his property? Does he hold it by the same right that the merchant, the mechanic or the lawyer does his? In one respect he does, for the law calls it property when she demands her tax for its protection, and as he improves his cultivated grounds and makes them more productive, and as the size of the timber in his woodlands increases so that they will yield a heavier burthen, law taxes them *higher* because their value as property is increased; and he who holds the deed of these premises is considered their true, lawful, and only owner. The tax is set to him. He must pay it or his lands are taken from him, and sold to make good his delinquencies.

Then if the lands are his, he must have a right to appropriate them to such productive purposes as his convenience or interest may dictate, and the productions must be his, and not the property of another. If he clears a patch of wood-land (as every farmer will find it his interest to do) to get his supply of fuel for the year, and that patch comes up to brambles, and these brambles furnish a supply of healthful food for his family, to whom do they belong? Public opinion says they are public property, and the public are on a strife to see who will get the most. May be the lawyer, the physician, the merchant and the mechanic are there, with a host of little ones who "do love the berries most dearly," and there too so often and so many that the poor farmers cannot get a tithe of the produce. "But they grow wild, are the spontaneous production of the soil, the gift of nature, and not the result of cultivation; this makes them free." Did not the farmer pay as well the value of his land as the merchant did that of his tape, and does not his yearly tax run as high in proportion to the value of his land as that of the merchant? Does not the very fact of ownership give as good a right to occupancy and use in one case as the other? If his soil will produce berries, while the successive growth of wood is shooting up, is it not his good fortune, and an assurance from nature that her productive powers are never withheld in giving those who seek to see her bounties increased? We can see no reason why those berries are not *the property* of the farmer and his alone, as much as the tape, the nutmeg or the broadcloth of the merchant are his. This however, is but a small consideration. We will suppose that nature has provided chestnut or walnut or other fruitbearing trees, and the soil on which these trees stand has become his by purchase, by their value in money actually being paid for them, and oftentimes his labor is expended in such ways as will tend to increase their value as nut bearing trees, by removing underwood and such trees as have a tendency to hinder the expansion of the branches and making the ground feasible for gathering the falling fruit. Are these trees, after all this care, *his* property, and like the stock of the merchant and the tradesman, his alone, until he transfer his right to another, or are they the *common stock* of all who wish to avail themselves of his purchase and his care in their behalf? In too many instances common practice says they *are not* his, and how often he is doomed to look upon his trees with sorrowing eyes, for the strange mutilations that have been inflicted upon them, in broken branches, bruised trunks, and all the destroying influence that could be adopted to secure the booty.

Again, take the farmer's field. Perhaps by negligence or perhaps by choice, he has permitted the raspberry or the gooseberry to grow along the old wall side, or the strawberry may have taken possession of the old field; such things, we will admit, are not in perfect accordance with good husbandry. It is in most instances cheaper getting these fruits by cultivation in the garden, and more profitable keeping the meadow in luxuriant grass crops. But this is not always done. Even good farmers may have their grass killed out and have a strawberry harvest from the field before they can bring back their lands to usual fertility. Are the strawberries his or his neighbors? Is the fact that there is not much grass in the mowing field, or along the fences of the grain lot, a sufficient apology for Tom, Dick or Harry's running over and trampling down what there is, provided they got and carried off none of the produce of the field? A merchant once said, in apology for gathering his neighbor's berries, i. e. his neighbor's if purchase gives the right of property, that he did not hurt the grass much, for there was not much there. Supposing this neighbor had gone to the store of the merchant day after day, and thrust his hand into his raisin box, filled his basket, and said he did not hurt the floor much, it was made to walk on, would the merchant have suffered him to have taken his first toll? No, and he ought not, for the raisins were his by purchase and possession, and none other had a right to them. The farmer who did that would have been a thief, and the merchant in his own mind at least, would have branded him as such.

Once more. You have a garden or an orchard. You set out trees in expectation of gathering choice fruit from them. After years, it may be of anxious watching and kindly culture, you see the first buds expand into beautiful flowers, and these flowers in their season succeeded by fruit. You watch its growth with daily solicitude, and as the season of maturity approaches, you see its gay colors taking tint from the sunbeams, and in fancy, realize the triumph of your toil in its exquisite deliciousness. A few days more, perhaps tomorrow, it will fall in its richness to the earth. But to-morrow comes, you resume your watching, but oh, sad thought, the objects of your care are all gone. "Ye have labored and other men have entered into your labor," and taken the first fruit. "What harm was there in it? only a few apples or pears or perhaps half a dozen clusters of grapes, surely none but a niggard would refuse his neighbor these; if he would, he ought to be drummed out of town."

Gentle reader, are these things right, or is it only owing to the frailty of our nature that we see them wrong? Is it giving that protection to the property of others, which we in turn demand from them? If so, let the matter be understood, so that all who occupy lands may be ready at all times to see others enter upon their premises at any time and take and destroy what they please and as much as they please, and set down, complacently looking at the result.

If they are wrong, it is high time for a reform in this matter, which is growing worse and worse, we believe, in almost every section of our country. Do you ask, where shall we seek a remedy? In the first place we would direct to a right education of the young. Teach them by your example that you will no sooner take the property from your neighbor's woodlands or his fields or his orchard or his garden, than you would his money from his desk. Teach your own children these facts, and they will teach your neighbors.

Let it be one of the chief lessons taught in all of our common schools. What greater wisdom can your child imbibe at these institutions than the great principles of honesty, fidelity in the minutia to his neighbor's goods, however trifling may be their value? Consider the teacher unqualified for his station, who fails to instruct in these things, and who allows his scholars needlessly to ramble in the neighboring fields, acquiring territory by conquest to which he has no right. Let a voice come from every pulpit, saying, "thou shalt not steal," and exhorting every one to work diligently with his hands to provide the good things which nature gives to those who labor for their attainment. Let all teach and all practice the principles of right, and gardens, fields and forests, will be as secure as the merchant's or mechanic's wares under his own eyes. WILLIAM BACON.

Charring Rails.

On almost all farms may be seen patches of rail fence which have been accidentally scorched by fire. Such rails never decay. Sun, wind or rain seem to have little or no effect upon them. The question naturally arises, whether in building new fences they might not be made much more valuable by charring? It has been shown conclusively that the best time for cutting fencing timber is in May or June, when the bark will peel. This should be immediately stripped off and the rails split and piled up in order to dry. After being seasoned two or three months, take them to the bank of a small stream, and having built a fire of chips or brush, heave on the rails. When they are sufficiently charred, they can be hauled into the stream by means of a potatoe hook, or some similar implement, and when the fire is extinguished, they can be hauled out on the other side. I believe that a fence made of charred rails, and put up with an iron rod inserted through each corner of the fence, and soldered to the underpinning stone, as directed in a former number of the Cultivator, would last fifty years, or five times as long as one not charred, with no trouble at all, after being once put up. It is true the first cost would be considerable, but it would be cheap in the end. If farmers would take the trouble to charr their rails, they would not have to spend weeks in the spring of the year mending up old rotten fence, nor have their crops half eaten up by unruly cattle.

If any of your correspondents have had any experience in charring rails, they would confer a favor by making it known through the columns of your paper. A YOUNG FARMER. *Madison, Conn., Sept.* 22, 1848.

WATERING TRANSPLANTED TREES.—The following skilful treatment for newly transplanted shrubs and trees, which are in danger of suffering by drying, is worthy of attention,—We have had occasion to make trial of this [wetting the tops instead of the roots] the present season. In one case, a rose imported from Paris, was much injured by long packing. It was, besides, poorly provided with roots, and would have been doubtful if only removed a rod from its place of growth. It has been covered with a barrel having one head during the day, which has been removed at night, for some four weeks. Night and morning, the top of the plant has been wet during the whole time. It is now pushing forth shoots, and the barrel with one head has been replaced by one without any—and which may be soon dispensed with altogether.—*Prairie Farmer.*

COST OF CORN.—S. Williams says in the *Genesee Farmer*, "A farmer told me yesterday that the actual cost of his last year's crop of corn was but 9½ cents per bushel, interest on land included.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Grapes in the West.

EDITORS OF THE CULTIVATOR—In your number for October, you refer to me as authority for the character and quality of the Herbemont and Lenoir grapes. I was in an error till this season, not having examined the fruit at my vineyards. What I formerly supposed to be the Lenoir, proves to be the Herbemont. What I then supposed to be the Herbemont, is, I believe, the McCall Madeira—a grape sent me by Mr. Thomas McCall, an intelligent vine cultivator, in Dublin, Ga. The true Lenoir has never succeeded with me till this season, though I have had it for 10 years. The fruit is nearly equal to the Herbemont, but the bunch is smaller. The Herbemont is a fine table and wine grape, equal to the Ohio in my opinion, and to the Meusneir or Bergundy, and the bunch much larger than the latter. It is a fine wine grape, and the wine in flavor and aroma resembles the Spanish Manzinilla, or Mansinaella, but in my opinion is a superior wine. But with me it rots badly. The wood is of light color, of thrifty growth, and bunches very compact. At our late Horticultural exhibition, it was placed next in quality to the Ohio, and was by a portion of the judges thought preferable.

In their opinion, as reported, in relation to the Elsinburg and Norton's Seedling, there is an error, or I deem them wrong. The Elsinburg, I deem far superior to the Norton. In my estimation you overrate the Little York Madeira, as I deem it inferior both for the table and wine, to the Cape grape, (Schuylkill Muscadell) to which you show no mercy. I obtained the York Madeira from a person in Little York, and raised fruit from it, but found it so inferior, that I rooted it out, and I do not now know of a single plant in this vicinity.

The Cape grape was the only one cultivated at Vevay, Indiana, to any extent for wine, as it was at an early day at Spring Hill vineyard, near Philadelphia, where they called it the Cape grape, pretending it came from the Cape of Good Hope, when in truth it was their next door neighbor, on the then wild banks of the Schuylkill. From it the people of Vevay made a rough, hard, red wine, by fermenting on the skins, and only valuable for the manufacture of sangaree. Pressed as soon as gathered, and sugar added (for it is deficient in the saccharine principle,) and some brandy, it makes a second quality Madeira wine. It is one of our hardiest vines, and least subject to the rot.

We shall not allow you of New-York to abuse our Cape grape, as we hold it to be 1000 per cent. superior to your Fox grapes, about which was made a few years since, so much palaver; and one of your horticulturists had a vineyard of them, with high sounding names, and they were offered for sale and highly lauded, when in truth they are only valuable when lead is scarce, to supply the place of musket balls, and may be of value for that purpose, if my Democratic party should make another war for conquest of a country not even suitable for the cultivation of the Fox grape.

You say that the English deem our native grapes as worthless. It may be because they are not suited to their climate. It may be an error of judgment. I deem all our best natives, (not including your famous Fox grapes) to be far superior to the Miller's Burgundy, (Meusneir,) which they praise highly. The Ohio, Herbemont, Swain, Missouri and Elsinburgh resemble it, but the bunches of the two first are much larger, and the fruit of larger size, and I think superior as a table grape. The Catawba, I deem not only a grape of fine quality as a table grape with us, but worth millions to our country as a wine grape. Major Adlum conferred a great benefit on his country when he brought this grape into public notice; but like all other new discoverers, he derived but little benefit from it.

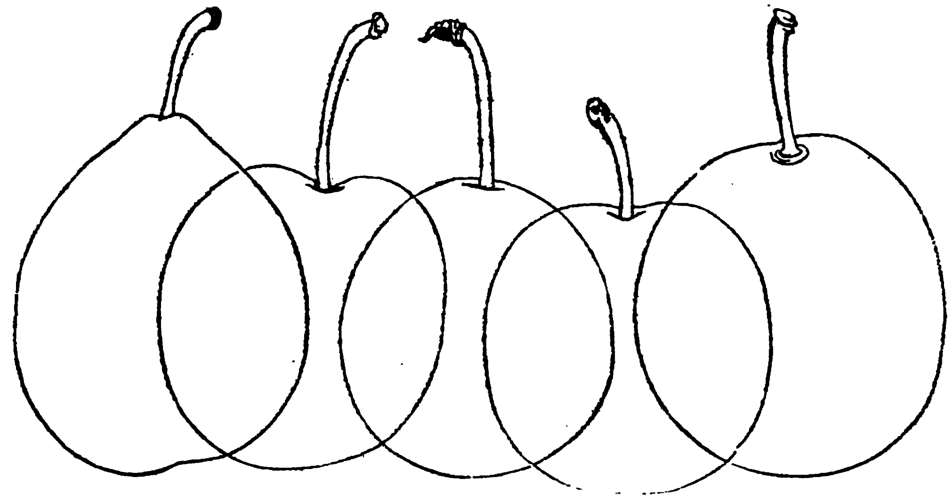
The English hold our strawberries in as little estimation as our grapes, and throw them away as barren. If they were *practical gardeners* and not *great botanists*, they would ascertain that the only value of their famous Keen's Seedling and Beehive, really is to impregnate the Hovey and other kinds, which they call *barren* plants, and the discarded Hovey would produce four times the quantity of fruit that those most esteemed by them will produce, and of superior size. The Beehive may belong to a rare class of strawberry plants, bearing blossoms purely pistillate, and a large portion more or less perfect in both organs, and therefore bearing what may be called a fine crop of perfect and imperfect berries. But the fruit will be found small, and only valuable as an impregnator, unless the fruit should come in very early, which is the case with many staminates; often a week in advance of the pistillates, and where this is the case, go out of blossom before the pistillates, and require a few late staminates to impregnate the late blossoms. Early strawberries, even if small, always command a high price. [illegible]lin's Seedling, will, I believe, prove superior as a staminate, to any plant now cultivated, and is worth 100 of the lauded Boston Pine. With us, with ordinary cultivation, the latter will not produce on an average one perfect fruit from ten blossoms. It is said, that to insure fruit from staminates, the plants must be kept separate. This to a certain extent is necessary with pistillates, to enable insects who carry the farina to get at the blossom. In staminates, as each [illegible] her own master, I should not deem close proximity so great an objection. But experience is better than speculation.

The cultivation of the Isabella grape is yearly lessening in this region. It often ripens badly, one half of the bunch ripening, and the berries of the other half being green. We deem it far inferior to several of our varieties of hardy gapes.. N. LONGWORTH. Cincinnati, *Oct.* 12, 1848.

The Ohio Fruit Convention,

Assembled at Columbus on the 27th of 9th [illegible] (Sept.) last, and continued its session two days. About thirty delegates were in attendance. A. H. ERNST, [illegible] Cincinnati, was chosen President, and F. R. ELL[illegible] and M. B. BATEHAM, Secretaries. Sixty-five varieties of apples, and a number of other fruits, were passed upon, and the Convention adjourned to meet next year at Cincinnati. F. R. ELLIOT, of Cleveland, a person eminently qualified for the service, was appointed to prepare the proceedings for publication, and we doubt not a large amount of interesting and valuable matter will be thus placed before the public.

LIQUID MANURE—GRAPES.—The *Ohio Cultivator* says that a grape vine at a hotel in that state, but th[illegible] years old, has climbed to the second story, and has extended its branches round the corners of the building a distance of twenty or thirty feet, nearly the whole being full of clusters of fruit. The only unusual treatment it had received, was a watering every day with dish-water, and occasionally with soap-suds.



Red Diaper. *Bleecker's Gage.* *Purple Favorite.* *Lawrence's Favorite.* *Jefferson.*

The above are outlines of five varieties of the plum, which possess valuable qualities, but are not so widely known as other varieties of less merit.

1. **Red Diaper**, *Diapree Rouge*, or *Mimms*.—Large, handsome, reddish purple; stem half to three-fourths of an inch long, slightly sunk; flesh free from stone, juicy, *melting*, sweet, delicious, better in flavor than Washington. Tree a rather slow grower. Last of summer.

2. **Bleecker's Gage.**—Medium in size, or rather large, roundish-oval, regular, suture very obscure; stem an inch long, downy, in a small cavity; skin yellow, at first with obscure clouds or stripes, and with numerous white specks; flesh sweet, juicy, rich, free from the stone. Late in summer. Distinguished from Prince's Yellow Gage by its longer and stouter stem, and later maturity; and from Lawrence's Favorite, which it resembles in flavor, by the much shorter stem and more obtuse fruit of the latter.

3. **Purple Favorite.**—Very few plums are equal to this in quality. Medium in size, often approaching large, roundish-obovate, somewhat variable in form, transverse section not unfrequently inclining to triangular; suture obsolete; skin dark dull reddish purple, irregularly or occasionally dotted with whitish specks. Stem nearly an inch long, very slightly sunk. Flesh free from the stone, greenish, tender, juicy, melting, sweet, rich, excellent; not quite the rich sweetness of the Green Gage, but exceedingly agreeable. Latter part of summer. Growth slow.

4. **Lawrence's Favorite**, or *Lawrence Gage*.—Rather large, roundish-oval, slightly flattened at the ends; suture, nearly even with the surface; skin greenish yellow, slightly clouded—and shaded, netted, and dotted, with reddish brown in the sun. Stem half an inch long, in a small cavity. Flesh with a rich greenish yellow hue, with an excellent and rather rich flavor, nearly free from the stone. Middle of 8 mo., (Aug.) Tree upright, thrifty.

5. **Jefferson.**—This celebrated plum has been widely disseminated within a few years. and wherever it has fruited. has maintained its high character. Although not quite so rich or excellent in flavor as some smaller varieties, it deserves to rank among the first, and by some is regarded as decidedly the best of all plums. It is large, oval, obscurely inclining to obovate; stem three-fourths of an inch long, in a small cavity; skin becoming yellow, often tinged with red in the sun; flesh a deep yellow, here slightly to the stone, rich, very sweet, juicy, high-flavored. Late in summer.

Pears for the South.

It is only within the last few years that the attention of our citizens has been drawn to the cultivation of such fruits as the peach, apple and pear, in this southern latitude. It was supposed that our southern sun was too powerful to perfect them, but we found we only required experience in their cultivation, and the proper selection of trees for our soil. Eperience has come to our aid, and it is worth what it has cost us to be enabled to luxuriate on our juicy, sweet and excellent fruits.

At one time we became disheartened from the impositions which were practiced on us by the nurserymen at the North, and by itinerant Frenchmen from *Paris*, by way (generally) of New-Orleans. The former, sending out worthless trees which had been picked up at auction or purchased from sources of no responsibility; the latter, by imposing on us worthless shrubs and fruit trees with high sounding names.

The taste for agricultural and horticultural improvement is rapidly increasing in this State, and I have no hesitation in saying, that any nurseryman can win a large share of patronage by integrity and liberality in dealing with us.

Believing that there are many such men at the North, and to enable them when they receive orders for *pear trees* (for to this tree I shall now confine myself,) the selection being left to them, to send trees which will give great satisfaction, we give a list of fourteen pears, which will yield a better return in the shape of profit and enjoyment than has yet been attained by the cultivation of any other kinds. These trees have been already introduced here—they were brought direct from France by one of our citizens, grafted on the *quince* and the *white thorn*, and have been tested and found wellt adapted to the climate and soil of Alabama. The lis is as follows:

Autumn Colmar,
Bezi de Heri,
Summer Bon Chretien,
Doyenne d'Ete,
Duchesse d'Angouleme,
Lou se Bonne,
Blanch Fleur,
Beurre d'Amalis,
Chaumontel,
Windsor,
Doyenne, Gray,
Doyenne, White,
Marie Louisa,
Bouquet.

My remarks in regard to the impositions practiced upon us, have been general. They relate in fact to all kinds of fruit and plants. A ready market has generally been found here, and an avidity for novelty. Th usual confidence of ignorance and inexperience has prevailed, and as in anticipated results "things to be known are inferred from things unknown." The human mind is prone to credulity—so in our purchases of plants and shrubs, whether for ornament or use, our people have been ever up to a full confidence in the representations of venders, whether those venders were the slick-tongued sons of France, or our own equally shrewd but rough countrymen of yankee land. S. B. North. *Mobile, Oct.* '48.

Productiveness of Strawberries.

In all the great strawberry controversy, about staminate and pistillate, monœcious and diœcious plants, the very important item of determining the productiveness of each variety, by actual experiment, and under the proper culture, seems to have been nearly forgotten. A correspondent of the Horticulturist at Poughkeepsie, furnishes nearly the only statement we have lately seen on this subject, although even this is somewhat indefinite. The soil was a heavy loam, without limestone; it was a heavy sod, broken up in 1845, not highly manured, and planted in the spring of 1846, with *Large Early Scarlet*, *Hudson Bay*, *Bishop's* and *Hovey's Seedling*. The result shows the Large Early Scarlet to be the best bearer, the Hudson next, Bishop's next, and Hovey's far behind the others. After trying the latter in various ways; he has never seen them bear one-fourth as much as the Large Early Scarlet.

Experiments elsewhere, and especially further south, have shown great productiveness in Hovey's Seedling. But in the State of New-York we have never seen any variety equal to the Large early Scarlet. M. G. Warner, of Rochester, famed for his success with strawberries, has found this more productive than any old sort, but is not sure that it may not be excelled by Burr's New Pine.

There is no doubt that the same treatment, which is best for one variety, may not be just the thing for another, and soil and climate may also exert controlling influences. In the midst of all the surfeit of discussion, we are starving for experiments, intelligently conducted, to exhibit the precise relative productiveness, by accurate measurement, of the different varieties, under the various influences of climate, soil, and culture.

Horticultural Facts,

Condensed from the Horticulturist and other sources.

Large Horse-chestnut Trees.—One tree in Lincoln, is 59 feet high, and the diameter of the head 100 feet. Another in Warwick, a hundred years after planting, was 70 feet high, diameter of foliage, 103 feet, diameter of the trunk at the ground, 7 feet. Two others, near Preebles, in Tweeddale, within 12 feet of each other, support one rounded mass of foliage 96 feet in diameter—their ages nearly 200 years. One near London, is about 100 feet high. One at Twizell, 18 years planted, was 38 feet high, and 15 inches in diameter. The supposed largest in America, is at Yonkers, N. Y., nearly 200 years old, 65 feet high.

Manuring Old Pear Trees.—A cultivator in Bucks county, Pa., mentions the case of an old and exhausted tree of the Seckel, (which needs and will bear more manure than most pears,) the fruit from which was so small as not to be worth gathering.

A trench three feet wide and sixteen inches deep was dug round the tree, at a distance of four feet from the tree to the nearest part of the trench, thus leaving an undug mass of roots eight feet in diameter. The earth from the trench was carted away, and was replaced with a peck of bone-dust, four cart-loads of stable manure, and enough fresh soil to fill the trench.

The roots soon shot into the new soil, the tree grew rapidly, was clothed in dense foliage, and the next year it bore a large crop of full-sized and delicious fruit; and the next or present year, they were still larger.

The Pratt Pear.—This new American variety is rated by A. J. Downing as among the twenty best yet known.

Experiments.—The London Horticultural Society has adopted the practice of trying "every experiment, however ludicrous, that has been so brought forward as to excite public attention; that an official report may be published of its fallacy, instead of denouncing it without trial, which often strengthens sinister schemes, —or reporting its success if it turns out well, on authority which cannot be questioned."

A Great Nursery.—Perhaps the largest nursery in the world, is Booth's in Holstein, one of the Danish provinces. It consists of 180 acres, and requires on an average, 130 men and 20 women, to cultivate it. Eighty packers are employed during the packing season. The average profit, for the last thirty years, has been $15.000 annually, though at one time for twelve years, the sale of dahlias alone netted $50,000 per annum, and to which eleven acres are still devoted. Some rare Orchideous plants sell for $300 each. Of this family of plants, they have 2000 varieties, and 2000 of the Dahlia. The collection of ornamental trees is enormous.

Peaches in the South.—M. W. Phillipps, of Edwards, Miss., states the following periods of the ripening of early peaches:—

"Early White Nutmeg,........	June 1st.
Early Tillotson,..............	" 20th.
Early York, ("true,")	" 21st.
Cole's Early Red,............	" 24th.
Early Red Rareripe,.........	" 26th.
President,....................	" 30th.
Snow,........................	July 1st."

Thus it appears, only 10 days elapsed from the ripening of the the Tillotsen to that of the President; in Western New-York that period is lengthened to more than a month. At Vicksburgh, the early peaches ripen two weeks earlier than at Edwards.

The London Horticultural Society, is the richest corporation of the kind in the world. Its assets, over £48,000; debt, £9,000; annual income, £6,091, ($30,000;) expenses, £5,294. It publishes quarterly transactions, and maintains one or two botanical travellers; and at last summer's exhibition, nearly 14,000 visitors were admitted by tickets of about a dollar each.

Raspberries.—S. A. Barrett, of Milton, N. Y., asserts that "a strong, deep loam, with but little sand, is the *only* soil from which a full crop is to be expected *every season*, from the Red Antwerp." He also states that N. Hallock, of that place, produced a crop the past season, from three quarters of an acre, which sold for $330, in the New-York market.

Perpetual Roses.—A correspondent of the *Horticulturist* says, "The way I pursue, is to pinch out, as soon as visible, every blossom bud that appears at the first crop, say from the middle of May till the middle of June. This reserves the strength of the plant for the after bloom; and accordingly I have such clusters of roses in July, August, September and October, as those who have not tried this stopping system can have no idea of. *La Reine*, *Madame Laffay*, *Compte de Paris*, and *Dutchess of Sutherland*, are particularly superb under this treatment.

Fire Blight and Iron.—The apparently capricious nature of fire blight, renders single cases of very little weight for or against a theory; but single cases are interesting, and form parts of a whole. M. B. Bateham, of the *Ohio Cultivator*, states that a number of large pear trees, 25 or 30 years old, in Mahoning county, were, about five years ago, struck with fire-blight, and in two years were apparently ruined. Several barrow-loads of *bog iron ore* from the neighborhood, were then placed round each tree. The following spring, new shoots appeared with great vigor, and the leaves assumed a deep green and healthy appearance, ultimately forming new tops.

PRUNING REMOVED TREES.—Many experiments have shown the value of shortening in the heads of transplanted trees—the following, from a correspondent of the *Prairie Farmer*, furnishes decided proof:—One instance out of many,—a cherry tree was transplanted after the leaves had appeared; they fell off, but by watering they re-appeared. But early in summer they turned yellow, and began again to fall. The top was then *all* cut off, leaving a single rod or stem, and the wounds were covered with grafting wax. It shot out new branches and flourished finely. We have known small trees successfully removed after making some inches of growth, by keeping the roots well immersed in *mud*, accompanied with a *very heavy pruning* of the parts above ground.

FRUIT IN ORANGE COUNTY, N. Y.—J. J. MONELL, Esq., in his address before the Agricultural Society of his county, states that Mr. DUBOIS and his sons, of Cornwall, have sold in one year, $1,500 worth of plums which grew on trees planted by the sides of their fences. It is also stated that they sold last year 500 baskets of peaches from an orchard of two acres—though only half of the trees bore. JOHN MCKIBBEN, of the same place, it is said, picked in 1846, 540 barrels of apples from six acres of land; and GEO. BRUNDAGE is said to have sold, this year, over 100 barrels of plums. The whole amount of plums sent from the town this year; is said to be upwards of 1200 barrels—yielding a profit of $6,000 to $10,000.

Farming at the North.

A subscriber at Beaufort, S. C., who wishes to settle "on a northern farm," sends us the following queries. Our answers to them must necessarily be rather indefinite—perhaps some one will be able to furnish the information called for, in a more detailed form.

"1. What amount of money will it require in a good farming district in New-York or Pennsylvania, to purchase 250 acres of land, one-fifth wood-land? (*a*)

"2. What would be the probable cost of constructing the buildings *necessary* for a farm of that size, in the best manner, not including the dwelling-house? (*b*)

"3. What number of permanent hands would it require? the amount of wages by the year and by the day? (*c*)

"4. What amount of interest upon the investment, with good management, can be obtained?" (*d*)

a. The cost of land in the states referred to, would probably be from ten to fifty dollars an acre, according to the location and quality of the soil.

b. The expense of erecting buildings will depend on the views of the owner, and the course of farming to be pursued. It is the practice in some neighborhoods to stack all the hay and grain, and only put up cheap shelters, such as sheds for the stock. From $1,000 to $2,500 would probably provide as good buildings, exclusive of the dwelling—as are usually found on farms of the size mentioned; but many farmers *begin* with not more than $500 cost of out-buildings.

c. The number of hands required will depend much on the kind of farming that is carried on, and the amount of labor to be expended in improvements, &c. A stock farm, where the land is kept chiefly in grass, will of course, require less hands than one devoted to tillage crops; so that without more knowledge of the plan to be pursued, it would be impossible to lay down any definite rule. Mr. DELAFIELD, near Geneva, in this state, who received the first premium on farms from the State Ag. Society, last year, has 120 acres of tillage annually, the cultivable part of the farm being 270 acres, thus—40 acres of wheat, 38 of barley, 17 of oats, 23 of Indian corn, 2 of potatoes—and he employs five hands by the year, and five more during the season of cultivating and securing crops. Wages are from ten to fifteen dollars a month by the year, and fifty to seventy-five cents a day, exclusive of board.

d. Seven per cent. would be considered a good interest on the investment. A few farms give more, but many less.

The following statement of PETER CRISPELL, Jr. of Ulster county, who received the second premium on farms in this state last year, may give a useful idea in connexion with this matter. The farm consists of 114 acres, exclusive of wood land:

Farm expenses from December 1st, 1846 to December 1st., 1847.

To paid hired man by year (deducting lost time)	$86	66
" 50 days work from April 1st to July 1st (by one man,)	25	00
" 18 do. Hoeing and planting corn,..	9	00
" 159¼ do. Harvesting,..............	145	31
" 89 do. Cutting up and husking corn.	44	50
" 3 Months work after harvest,......	30	00
" 8 Months work by hired boy,.......	48	00
" 8 do. by son aged 15 years (worth)	40	00
" Hand help in house,................	27	12
" Blacksmith and wagon repairs,........	43	73
" Merchandize and groceries,............	172	29
" 1000 bushels ashes,..................	110	00
" 2 bushels clover seed,................	11	00
" 3000 ft. hemlock boards (at mill).....	16	87
" Taxes, Town, School, &c. (about)	50	00
	$849	48

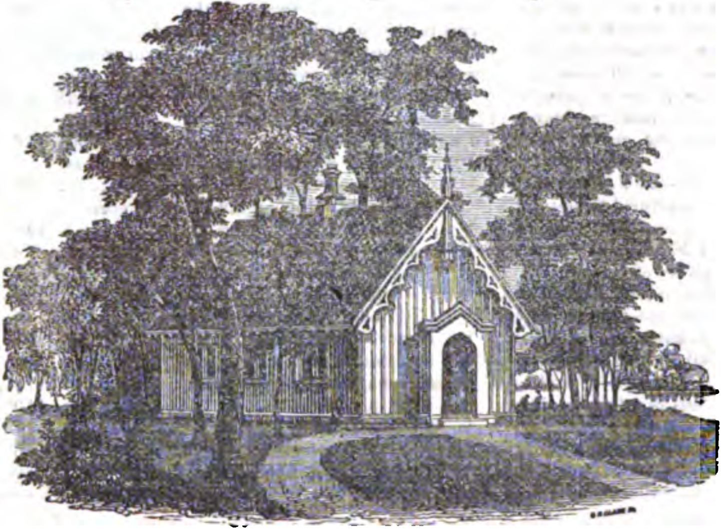
Amount of Crops sold and to be sold.

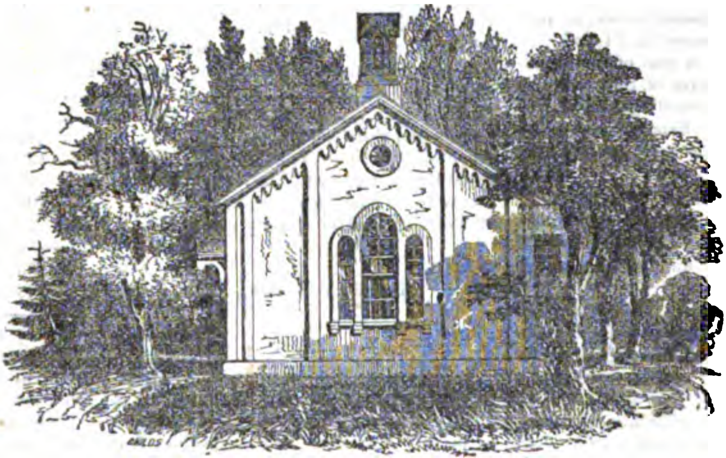
532 bushels of oats (sold)	$266	00
300 do rye (mostly sold)...........	258	00
900 do corn (to be sold) at 75 cts.,...	675	00
22 do wheat, (sold) at $1.75.......	38	50
8¼ do flaxseed (sold)...............	10	31
100 lb. flax, (to be sold)..................	10	00
About 50 tons of hay (partly sold)	500	00
160 bushels potatoes (partly sold) at 50 cents,	80	00
Beef, hide, &c.,..........................	18	80
Pork sold,................................	17	28
Calves and skins sold, ...	10	40
About 600 lbs. butter, at 20 cents (sold)	120	00
2940 Eggs, (sold at)......................	29	21
Straw to be sold for more than $100,........	100	00
10 loads cornstalks (partly sold)............	20	00
	$2153	50
Deduct expenses,..................	849	48
	$1304	02

In regard to the above account, Mr. CRISPELL adds: "In the above I have included all the labor on the farm and in the family, except what has been performed by myself in harvest, and in husking, that being the only labor performed by myself, and the labor of my wife and daughter in the house. There are some other family expenses which I do not consider farm expenses, but which are to be paid out of the avails of the farm, such as shoemakers, weavers, tailors, &c., bills. My shoemaker's bill for the same time, amounts to $26.65, paid for weaving, $9.60; paid for making clothing and other wearing apparel, $8.25; for newspapers taken, $14, for minister's salary, $25, amounting in all to $83.60. This, I believe, will include all the ordinary expenses of the family and farm."

CONSTRUCTION OF SCHOOL-HOUSES.

We once heard a distinguished traveling lecturer on education, assert that he could at once know a district school-house from any other building, by its being the *worst-looking* house in the neighborhood. Broken windows and broken walls, and a general air of desolation, have in many cases been the leading features. If children are to be taught the knowledge of order and comfort, these are miserable examples to set before them. In strong contrast with such pictures, is one described by Downing, a building erected for a *free-school*, by a private gentleman in Dutchess county, as an example for a district school. "It was a building simple enough, after all. A projecting roof, with slightly ornamented brackets, a pretty porch, neat chimney tops; its color a soft, neutral tint; these were its leading features. But a single glance at it, told in a moment, that *the evil spirit had been cast out*, and the good spirit had taken its place. The utmost neatness and cleanliness appeared in every part. Beautiful vines and creepers climbed upon the walls, and hung in festoons over the windows. Groups of trees and flowering shrubs, were thriving within its enclosure. A bit of neat lawn surrounded the building, and was evidently an object of care and respect with the pupils themselves." Such an example before children could hardly fail to exert a controling influence, to continue through after life.





The accompanying engravings are from a work lately published on School Architecture, and the Improvement of School-Houses in the United States; by Henry Barnard, Commissioner of Schools in Rhode Island. They were designed by Mr. Teft, an architect who appears to comprehend the art of combining convenience with tastefulness and beauty, in structures of this kind. The buildings here represented are erected, one at North Providence, the other at Westerly, R. I.

We have not yet met with the volume above alluded to, and therefore take the following from a notice by the editor of the *Horticulturist*. After speaking of the various plans for all sizes of school-houses, "primary, district, grammar, intermediate, public, or high, and normal schools," it is observed:—

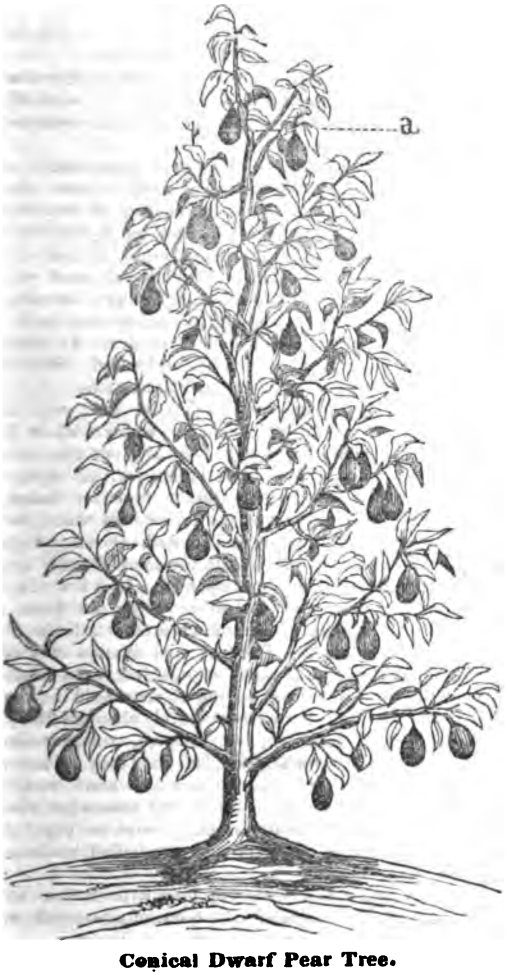
"But these plans, numerous as they are, constitute but a small part of the utility of the work. What gratifies us quite as much, or even more, is the pains taken by the author to point out and suggest remedies for some of the crying evils in almost all the common schools at present existing,—evils which exert a most injurious influence on the health and minds of pupils.

"We allude especially to improved modes of *ventillation*, *warming*, and *seating* the inmates of common school-houses. A want of proper attention to the two first most important considerations is the cause of a great deal of bodily discomfort; and we have the opinion of some of the most skilful physicians of the country, for believing that a large number of the spinal distortions of late so prevalent, owe their origin to the cramped and unsuitable seats and writing desks, to which the tender frames of pupils are confined in schools.

"To assist in banishing these evils, Mr. Barnard has not only very lucidly explained the advantages of proper ventillation, but he gives diagrams and details, showing how the Boston mode of ventillation, (a most excellent one) is easily applied to all school-houses, so as effectually to prevent the possibility of the accumulation of deleterious or impure air.

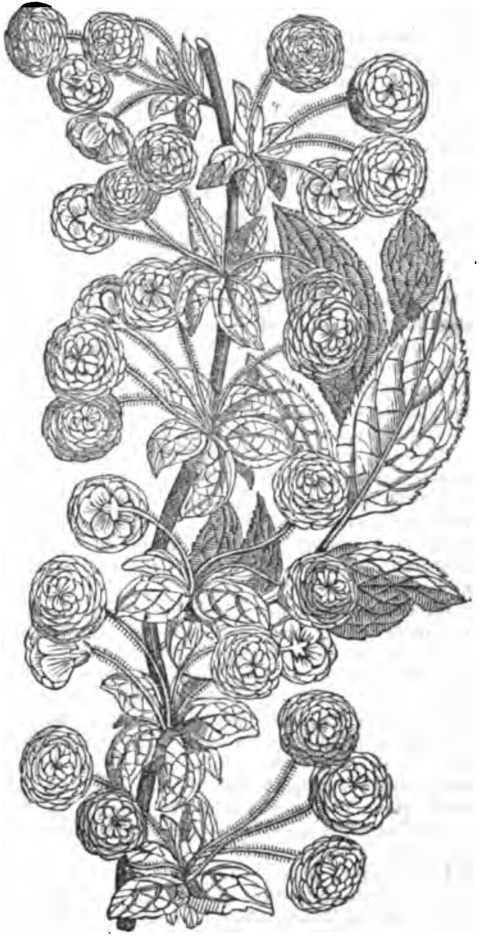
"In speaking of the accommodations in primary schools, we find the following, among other valuable hints for the teacher's own use:—

'Little children are made to suffer, and many of them permanently, from being forced to sit long in one position, without any occupation for mind or muscles, on seats without backs, and so high that their feet cannot touch, much less rest on the floor. Nothing but the fear of punishment, or its frequent application, can keep a live child still under such circumstances, and even that cannot do it long. Who has not an aching remembrance of the torture of this unnatural confinement, and the burning sense of injustice, for punishment inflicted for some unavoidable manifestation of uneasiness and pain? Even though the seats are as comfortable as can be made, young children cannot and should not be kept still upon them long at a time, and never without something innocent or useful to do; and under no circumstances longer than twenty-five or thirty minutes in one position, nor so long at one study, and that with frequent and free exercise in the open air. To accomplish this, great and radical changes in the views and practice of teachers, parents, and the community at large must take place. Nowhere, in the whole department of practical education, is a gradual change more needed, or should sooner be commenced.' "



Conical Dwarf Pear Tree.

This form of training pear trees has been deemed, by some experienced cultivators, to give the greatest quantity and best quality of fruit. Downing suggests that the best way to grow trees in this form, is to choose a tree of but one year's growth, from the graft, as older trees are apt to be bare of branches at the lower part of their stems. The leading shoot of the young tree is to be shortened back to within a foot or eighteen inches of the ground, at the time of planting it. This will develope the lower branches; to encourage the growth of which still more, it is well to shorten back the leading shoot, about the first of July. This will, about the middle of the growth the next spring, cause to start out another tier of branches, a foot above the last. The next summer, in July, the leader is again cut back to within a foot of the last tier, which will cause the growth of a third set, and this must be repeated every year till the tree is from 6 to 10 feet high, as the taste of the cultivator may direct. It is considered better to pinch off the ends of such side-shoots as are inclined to grow too long, than to prune them.



Spirea Prunifolia.

This beautiful shrub, which was introduced into Europe by Dr. SIEBOLD, is thus described. It was found cultivated in the Japanese gardens, and is supposed to be a native of the north of China. It is from 6 to 9 feet high, and has upright, close, bushy, slender branches, which are covered with a smooth, ash-colored bark; that detaches itself at a later period in thin scales. The leaves are oval, or ovate-elliptic, rounded at their base, obtuse, or a little acute at their apex, downy beneath, denticulated at the edge. The flowers, which grow by threes or sixes, cover the whole length of the branches, are as white as snow, and very double, in consequence of a complete abortion of their stamens. Their shape is exactly like that of the Ranunculus aconitifolius, with double flowers, and their number and arrangement, together with a light and elegant bright green foliage, render this plant a charming addition to the plants which grow in the open air.

Domestic Economy, Recipes, &c.

Curing Provisions.

As this is the season of the year when farmers are engaged in packing their stores of meat, we offer the following recipes, the value of which we have proved by our own experience.

Hams.—The following mode of preparing hams, we have practiced for several years, and can with confidence recommend it to others.

For every one hundred pounds of meat, take five pints of good molasses, (or five pounds brown sugar,) five ounces saltpetre, and eight pounds rock salt—add three gallons of water, and boil the ingredients over a gentle fire, skimming off the froth or scum as it rises. Continue the boiling till the salt, &c. is dissolved. Have the hams nicely cut and trimmed, packed in casks with the shank end down, as the pickle will thus strike in better. When the pickle, prepared as above, is sufficiently cool, pour it over the hams. They may lie in pickle from two to six weeks, according to the size of the pieces, or the state of the weather, more time being required in cold, than in warm weather. Beef or mutton hams, intended for smoking and drying, may be cured according to this mode, and will be found excellent.

Much of the goodness of hams depends on smoking. They should be hung at such a distance from the fire, as not to be heated. They should also be hung up with the shank end downward, as this will prevent the escape of their juices by dripping. Small hams, wanted for immediate use, will answer with two weeks' smoking, but larger ones, and those wanted for keeping, should be smoked four weeks or more.

Different articles are used for smoking. Perhaps saw-dust from hard wood, where it can be conveniently had, is on the whole to be preferred. Corn cobs are first rate, and are said by some to make the "sweetest" smoke of anything. Chips of maple and hickory, or the small twigs and branches of those kinds of wood, do well.

Hams are sometimes cured by adding pyroligneous acid to the pickle, but having had no experience with this mode, we cannot speak of its advantages. Another mode, which we have seen practiced, is to *smoke the barrels or casks* in which the hams are to be kept, and let them remain in pickle till wanted, only taking them out a sufficiently long time before using, to allow them to drain properly. The barrels are smoked by being placed over small fires of chips, cobs, &c. for several hours. The essence of smoke which is thus imbibed by the barrel, is imparted to the pickle, and thence to the meat.

Westphalia Hams.—The following compound will give to any common ham the taste so much appreciated in that sold as Westphalia, and is recommended to them who prefer that flavor. In one hundred parts of water dissolve four parts of salt, two parts of brown sugar, one part Barbadoes tar, and one part spirits of wine. After it has been well mixed and stood for several days, three tablespoonfuls may be mixed with the salt necessary to cure an ordinary ham.

Beef.—The best pieces for corning, are the plates, ribs and briskets. Pack the pieces in casks, giving a very slight sprinkling of salt between each piece. Then cover the meat with a pickle made by boiling together, in 4 gallons of water, 8 lbs. salt, 3 lbs. brown sugar, 3 oz. saltpetre, 1 oz. pearlash, for 100 lbs. meat. Keep a heavy flat stone on the meat, that it may be well immersed in the pickle. Beef packed in this manner will keep a year, and will rather improve than grow worse.

Another mode recommended by a gentleman of long experience in the packing of beef and pork, is the following: For 100 lbs. beef take 4 lbs. brown sugar, 4 oz. saltpetre, and 4 quarts fine Liverpool salt, mix all intimately together. and in packing, sprinkle it evenly over the meat. Add no pickle, the dissolving of the salt, &c. with the juices of the meat, will be sufficient. Keep the meat closely pressed together by a good weight. We are assured that this is the best mode of packing beef that is intended for keeping over the summer, and that the quality of the meat is unexceptionably fine.

Clear Pork.—For this we prefer clear salt and water. After having divided the hog, take off the shoulders and hams, and all the lean meat, cut the sides crosswise into strips, four or five inches wide, and after covering the bottom of the cask with salt, pack the strips in layers set edgwise as closely as possible round the cask, with plenty of salt between each layer. When the cask is full and has settled for a day or two, put in cold water enough to fairly cover the pork. There is no danger of using too much salt for clear pork—no more will be taken up by the meat than is needed, and the remainder is safely left, and may be used in packing a new parcel.

Gather up the Fragments.

Families who kill their own beef and pork, always have various odds and ends which may be worked up in such a way as to form some of the most wholesome and palatable dishes.

Tripe.—Take the tripe as soon as practicable after it comes from the animal, rinse it well in cold water, and immediately sprinkle a thick coating of air-slacked lime over the inside—roll it up and let it lie till the next day. Then cut it in pieces eight or ten inches square, scrape it, and put in soak in salt and water, where it should remain seven or eight days, or till the strong smell is entirely gone, changing the salt and water every day. Then boil it tender. It may be soused like pigs' feet, or it may be broiled, fried with sausages, or dipped in batter and fried alone.

Souse.—Take pigs' feet, the head, &c., and after bieng well cleaned, boil them in water with a little salt, till the meat drops off. Then slip out the largest bones, and put the meat in a stone jar, or well-seasoned wood firkin. Make a liquor to cover them, as follows: Take one quart of the liquor they were boiled in, two quarts of vinegar, spiced with cloves, allspice, pepper, and cinnamon. While the meat is still warm, pour the liquor, boiling hot, upon it. In a few days it is fit for use, and may be either rolled in flour and fried in lard or sausage fat, or warmed in a little of the liquor, or eaten cold. The feet and shanks of *cattle*, cleansed in the same manner as pigs' feet, are excellent. When sufficiently boiled, all the bones should be taken out, the meat and sinews immediately chopped fine, and seasoned with salt, pepper, allspice, summer-savory and sage. When wanted for use, they may be warmed over in a little butter, and are nice, delicate eating—scarce inferior to oysters, which they somewhat resembles. They make equally as good souse as pigs' feet. The jelly which is left after they are boiled, makes excellent *blanc mange*.

Sausages.—Chop 6 lbs. of lean with 2 lbs. of fat pork, 4 table-spoonsful of salt, 6 do. of powdered sage, 4 of black pepper, and 2 of cloves—a litttle rosemary may be added. If not stuffed, keep the meat in a tin vessel, tied down close; and when to be used roll it into cakes, dust them with flour, and fry.

Pickled Cabbages.—Take the heads of red cabbage, and quarter them. Then pack them in a cask or stone ware vessel, giving each layer a good sprinkling of salt, and place some weight on them. After remaining about a week, prepare some vinegar by adding to each gallon one ounce each of mace, cinnamon, and black pepper, and a small bit of alum. Heat the vinegar scalding hot and pour over the cabbage. When cool, tie over or cover the top of the vessel, so as to keep the contents from the air as much as possible.—*Morgan Chronicle.*

Notices of New Publications.

Breeds, Management, Structure and Diseases of the Sheep: with illustrative engravings, and an Appendix. By Henry J. Canfield, of Canfield, Mahoning County, Ohio.

This is a volume of 395 pages duodecimo. In that part of the work relating to the natural history and breeds of sheep, the author appears to have followed Youatt, Spooner, and others, and this is also the case in a considerable degree in regard to diseases, and management. In reference to diseases, however, the author has in several instances given his own ideas, which he states have been formed from the results of experience, and much study of the subject. He is of the opinion that the disease called the *rot* has been the cause of greater loss in sheep than has generally been believed—greater, perhaps, than any other disease. This is a conclusion which will probably be admitted by most persons who have given the matter much consideration. The means of prevention and the remedy proposed for this disease are in some respects new, and should be carefully considered. He thinks the immediate cause of the disease commonly known as rot, is "the acids which are produced by the fermentation of food in the stomach." The remote cause is the deficiency of earthy salts in the food. Grass or herbage of much succulence is of this nature. The disease and treatment are described as follows:

"In the *rot* or *gradual decay of the bowels*, there is a chronic inflammation of the mucus membranes of some part or parts of the intestinal tube, which is frequently not very severe; the tongue, though furred, may show little or no sign of inflammation, and, at the same time, the lacteal ducts and mesentery glands are gradually decaying, in consequence of this inflammation; nutriment cannot pass into the lacteal ducts through the inflamed parts, nor through those parts which are injured by abscesses, and, consequently, the sheep pines away by degrees. This is, properly speaking, the rot; it is very similar to the dyspepsia of man, and the complication of diseases which ensues, is the result of this indigestion.

Treatment of the Rot.—When man is afflicted with chronic inflammation of the mucus membranes of the bowels in this manner, it has been found that mineral water, which is strongly impregnated with gypsum, (Plaster of Paris,) is one of the best remedies for this complaint; and mankind are seldom afflicted with dysentery in those districts where the waters are made hard by gypsum; and most hard waters are of this description: and dysentery is an acute inflammation of the mucus membranes of the lower parts of the bowels; and it is only when lime and gypsum are deficient in upland grasses, that graminivorous animals, feeding upon them, are afflicted with inflammations of the mucus membranes of the bowels. The reason for this effect appears to be, that inflammation is the beginning of decomposition; gypsum is the natural astringent of the bowels both to man and beast, and its powerful antiseptic qualities arrest the decomposition which begins in the parts inflamed, and nature restores them to a healthy action.

"Therefore, when the bowels of sheep are more or less decayed, nothing better can be done for them than to give them a full proportion of gypsum and lime in their condiments, and a suitable proportion of tar or pitch along with them; and if any one does not incline to eat ashes and gypsum, a cleaner mixture may be made with one part slacked lime or chalk, two parts gypsum, and two or three parts common salt: such a mixture will not be refused.

"In winter, sheep, whose bowels are in any wise decayed, should be kept warm and dry, and should be provided with a supply of well-cured hay, and a moderate supply of grain: but special care should be used not to feed them so much as to scour them.

"This course will, in most cases, arrest the disease, and prevent any further decay of the lacteal ducts and mesentery glands, and will take away all diseased action, so that such animals may, with propriety, be fattened and eaten, in all cases where they can be made fat: but it is seldom that medicine can restore them to their original sound state, when their bowels are much decayed."

Under the head of "Condiments," the mixture alluded to is more particularly described thus:

"I have used ten parts leached ashes, one part gypsum, and two or three parts common salt, in wet seasons; at other times, one-third salt, and the balance in gypsum and ashes. Others can mix these articles, as they find necessary by experiment. For each one hundred sheep, two to four pounds of pitch pulverized, and mixed with these articles monthly, will be sufficient in most cases, to prevent dropsy, and affections of the lungs. The various condiments should be rightly proportioned. If the alkalies and alkaline salts superabound, they will be injurious by causing too great relaxation; but if the earthy condiments superabound, they will pass through the bowels harmlessly.

"Where ashes cannot be conveniently obtained, two parts slacked lime or chalk, one part gypsum, and one or two parts of common salt, may be mixed together, and used advantageously for the same purpose; and, if convenient, one part burnt clay may be pulverized, and usefully mixed with these ingredients, along with bitter articles. The quantity which sheep will eat weekly varies; sometimes a hundred sheep will eat, in one week, a bushel of salt, ashes and gypsum, mixed in proportion as first mentioned: at other times the same amount will suffice them for three or four weeks. The quantity of ashes and gypsum, which they seem to require, evidently depends upon the quality of the grass or hay.

"Perfect digestion is the great source of health to all animals, and, therefore, particular attention should be paid to supply the condiments which may be necessary for them; and when they are supplied, their digestion will generally be very perfect, and a less quantity of food will suffice them, than if they are withheld.

"In order to test the properties of gypsum, I fed one part gypsum, and two parts common salt to sheep and cattle. In the softest and rankest pastures, all diarrhœ of sheep was entirely prevented. Its effect upon calves and fatting cattle was particularly excellent. Gypsum mixed with salt or with provender is also very useful to horses afflicted with slavering, or the heaves."

American Journal of Science and Arts.—The November number of this work is before us. It contains a large amount of scientific matter, as well as several articles interesting to the popular reader. We notice one by Prof. Henry, giving explanations and illustrations of the plan of the Smithsonian Institute; Report on Meteorites, by Prof. C. U. Shepard; Notes on the Mines of a portion of the State of Mexico, by Lieut. G. W. Raines; Structure of the Jaws and Teeth of the Iguandon, by Dr. Mantell; Shooting stars of August 10, 1848; Electricity as applied to Telegraphic purposes; The Dead Sea Expedition; Arotic Expedition in search of Sir John Franklin, &c., &c. The value of this work renders it deserving of the patronage of the public. Published at New Haven on the first day of every second month, at $5 per year. Edited by Messrs. SILLIMAN & DANA.

OBSERVATIONS on the Production, Manufacture, Transportation and Preservation of the CEREAL GRAINS. By J. R. STAFFORD.

This pamphlet is chiefly devoted to stating the advantages of preserving grain, meal and flour in all climates, and to an explanation of the operation of a machine called Stafford's Patent Revolving Dryer and Cooler. We have noticed the invention on former occasions, and have since received favorable accounts of it. The patentee claims for this dryer the following advantages:

1. That it dries all substances without the possibility of change of quality, color or flavor.
2. That it occupies less space, takes less fuel, and does more work than any other dryer.
3. The only attention required is to keep up steam sufficient to blow off at the valve weighed at any desired pressure.
4. That the motion and the heat being uniform, with sufficient capacity of dryer, a given amount of grain or other substances must be dried, without destroying their vitality.

THIRTEEN LECTURES, on a new Self-supporting System of General and Liberal Education. By EZEKIEL RICH, Minister of the Gospel and an Educator.

This is a little book of 224 pages duodecimo, designed to show the views of the author in regard to a reform in writing the English language—a subject to which he has devoted much time and attention.

"THE AMERICAN FLORA, illustrated with four to six beautiful colored engravings, taken from Nature," edited by Dr. A. B. STRONG, and published by Green & Spencer, 140 Nassau street, New York. This work is issued monthly, in demi-quarto form, each No. containing four to six plates, with 16 pages of superior letter press. The October No. has four colored plates, viz. The Moss Rose, Sanguinaria Canadensis, Lupinus perennis, and Pear. Terms—$3 a year.

ILLUSTRATED NATURAL HISTORY, by the same editor, and published monthly, at $1 a year. The October No. has four lithographic plates of animals and birds, which are worth the price of the number.

Profits of Fowls.

LYMAN CHURCH, of Middlefield, Mass., states that he has derived a nett profit of $108 19-100 in one year, from 140 fowls. He submits his account, as follows:

Value of stock, Nov. 1, 1847,..............	$40 35
Expense of feed,..........................	116 45
	$156 80
Value of stock, Oct. 1848,....	$65 30
" of Poultry sold,.....................	30 68
" of Manure, 63 bu., 15 cts............	9 45
" of Eggs, 1,256 doz., 13 1-2 cts.,.....	169 56
	$264 99

He states that he arrives at this result by actual and careful experiment, without guessing or conjecture. We extract from his communication, in the *Hampshire Gazette*, the following in relation to the treatment of his follows: "I give them a warm house, with a comfortable yard or range, and 150 hens should have from one-half to three quarters of an acre. My house is so arranged as to keep them when I choose, in separate apartments and constantly supplied with food, old plastering, lime, gravel, water, &c.,—with some secret nests, as well as open boxes, for them to lay in. The house should be kept well white-washed and as clean as possible. The kind of food I use is varied occasionally, —corn, boiled potatoes, barley, oats and wheat screenings; the latter especially I find very valuable. The quality of the food, however, does not, in my opinion, influence the laying so much as is imagined. They must have enough to eat, and be made comfortable in other respects. With my management they lay the year round."

Characteristics of the Season 1848.

In this latitude, any show of vegetation before the 2d spring months, is always regarded as premature; hence the adage that "all the grass which grows in March will die in April." In fact it is not, usually, till the near approach of May that the greenness of the fields and forests becomes fairly conspicuous.

April last, exhibited nothing to excite particular remark, except that the month was very dry. May commenced with abundant rain, which suddenly clothed the trees with foliage of unusual richness. From the middle of this month till the middle of June, the weather was generally cold and wet; but it then became warm and all crops rapidly advanced in growth. Up to the latter part of July, almost all parts of the country were well supplied with moisture. After that period, however, many sections were visited by drouth. A belt of country extending from the Allegany range to the eastward, embracing some of the southern counties of this State, the northern part of New Jersey, and a considerable portion of Connecticut, has suffered severely from this cause.

The average degree of heat for the season has been less than usual—the number of *hot* days comparatively few, and the period of warm weather extremely short. There was frost in many places on the first of June, and in particular spots on the thirteenth, and by the first week in September its effects might again be seen. September and October were chilly and damp—there being but few fair days.

Hay gave a full crop, and the growth of grass was generally good in all parts of the country, during the early part of the season.

Wheat gave a full average yield in most sections, though in some neighborhoods the crop was damaged by wet weather after it was cut.

Rye was generally a full yield, and of good quality.

Barley did not yield as well as usual in the central portions of the state, where it is cultivated extensively, but in some other sections the crop was fine.

Oats are generally heavy, though with rather a disproportion of straw.

Indian Corn, that important article for home consumption, and which is becoming every year more valuable for exportation, has been good—except in the colder and more northern parts of the country, where, in some instances, it failed to ripen fully. But taking the whole country together, the crop has never done better, and the quantity produced must be unprecedented. The best processes of kiln-drying this grain are coming into use, by which we are enabled to send it to foreign ports in good order, and it can be brought from the interior of our country, where it is raised at a cheap rate.

Potatoes have been less injured by the "disease" or rot, than for the last three or four years. The crop was more or less effected about the first August, and in some instances suffered to the amount of fifty per cent or more. The general yield, however, was light—in many places not half an average—even where the tubers have shown no symptoms of decay. Our accounts from Europe represent the disease as less virulent, generally, than in former years. In England and Scotland, the crop is decidedly better than that of 1847, and in Ireland the destruction has been less, except in a few districts.

Of *fruits* there was an entire failure, in this vicinity, of cherries, plums, and peaches, occasioned, as is believed, by the starting of the buds in the fall, and the sudden occurrence of extreme cold in February. A hundred miles farther south, however, the stone fruits were generally good, and in New Jersey and Delaware peaches were never more plenty. Apples are plenty and good. Pears in this vicinity, were not as good as usual. The trees have suffered greatly from blight—the cause of which is yet veiled in some mystery.

But in view of all the products of the season, the American husbandman has abundant reason to be satisfied. In all the essential articles of subsistence, the earth has yielded a bountiful increase. No dread of famine disturbs the minds of any of our people, but from all quarters we hear the joyous intelligence, that there is "bread enough and to spare."

Hints for the Season.

Operations on the farm are usually suspended, in this latitude, by the first of December; though as long as the ground continues open, something may be done Stones may be dug, walls built, drains made, ground plowed, and materials for manure collected. When the ground has frozen, and a light coating of snow has fallen, a good opportunity is presented for moving wood, timber and other articles, taking produce to market, &c., business which may be done with much greater facility now than when the roads become blocked with deep snows.

Live stock may be allowed to graze such fields as have not been already sufficiently depastured, as long as the ground is bare; but cattle should not be permitted to run on soils that are so soft as to be poached by their hoofs. They will need shelter at night, and in stormy weather. Dry lands, that have a coat of grass reserved on them, may be fed by sheep any time in the winter when not covered with snow.

In the distribution of the winter's supply of fodder, the coarser and poorer kinds should be reserved till the coldest weather—the appetites of the animals being then sharpest, it will be eaten with least waste. Those farmers who are not already provided with cutting machines, will do well to procure them. Their use is attended with considerable economy. Coarse hay, straw, or corn-stalks, are, by being passed through a cutter, brought into a more convenient form for mastication, and substances are eaten which would otherwise be rejected, or only partially consumed. Cutting affords an opportunity for mixing fodder of inferior quality with that which is more palatable, thus inducing the stock to eat that which would not be eaten if given by itself. Cutting also affords the most convenient means of mixing meal, shorts or bran with fodder, by which the double advantage is gained of consuming articles which would otherwise be more or less wasted, and of so diffusing the meal that its nutriment is thoroughly extracted by the animal. The feeding of laboring animals on cut food allows them more time to rest—the cutting performing, in a great degree, the work of chewing and preparation for digestion. But it should not be attempted to feed stock with substances which are chiefly destitute of nutriment. The large sour butts of corn stalks are little else than woody fibre, and can be of little or no use in supporting animal life. Where a cutter is worked by horse-power, it may be an object to cut such articles on account of the convenience of working them into manure.

Attention should be given to keeping all animals, as much as possible, in a condition congenial to their habits. Their comfort should be consulted in regard to both food and shelter. Undue exposure to cold, not only requires a greater amount of food to sustain the system, but it prevents the natural secretions, and actually wastes the bodily tissues. The most proper temperature is that which would be naturally sought by the animal. Sheep may be allowed to take shelter or not, at their option, and this liberty may be given to all stock, which it is not necessary to fasten in stables a portion of the time. Close quarters are probably preferable for animals which it is designed to fatten, in order to prevent the loss of their flesh by muscular exercise.

We have alluded above to late plowing. There are some circumstances which may render this expedient. Land which is filled with couch grass (Triticum repens) by being plowed so as to expose the roots to the action of frost, can be much easier cleaned the following season, as the freezing of the plant in this situation greatly weakens its vitality. Tenacious soils, by being thrown into ridges in such a manner as to throw off the water, and let the surface freeze while dry, are rendered mellow and friable, and are readily brought into excellent condition for planting in spring.

Conclusion of the Season—Potato Crop,

With general remarks on the Potato.

The year 1848 will long be remembered, at least in central New-York, for its cool summer and autumn. The occurrence of a few hot days in June, connected with frequent sudden extreme changes in that month, and the first half of July, (see remarks on the season in your October No.) very seriously threatened the potato crop. But the steady, cool character of the remainder of the season, while it almost annihilated the crop of melons, squashes and pickle cucumbers, was very favorable to the potato. The yield and healthfulness of the crop this year has been superior to that of any other for four or five years. Still in cases of rich soil, and more especially in cases of late planting and tender varieties, the disease has been very fatal.

A season moderately moist, cool and steady, such as is favorable to wheat, oats and grass, will be found highly appropriate to potatoes; while one hot and dry, such as is fitted to mature corn, melons and tomatoes, will be found unfavorable. Such, however, is the great natural vigor of this plant, that it has, until lately, withstood the unnatural treatment to which we have subjected it in planting it in the same soil and climate with corn. The ancient Peruvian Indians, the earliest cultivators of this plant of whom we have any knowledge, cultivated this crop higher up on the mountain side than corn, and not corn only, but also higher up than where the Spaniards subsequently cultivated wheat and barley.

Our unnatural treatment of it, connected with our neglect to renew it frequently from vigorous healthful seed, has well nigh ruined the potato. As, however, we cannot always choose such a soil and climate as we could desire for this most valuable crop, we may still hope to succeed, as we formerly have done, by a wise selection of soil, exposition, and early planting, and especially by the renewal of our seed from vigorous sources. C. E. G. *Utica, Nov.*, 1848.

Big Sheep.—It is stated that some of the sheep exhibited at the last show of the Royal Agricultural Society, were estimated to weigh as follows: Leicesters, of 16 months old, 46 lbs. per quarter; of the same breed, 3 years and 4 months old, 56 lbs. per quarter. Long-wools, (not Leicester,) 16 months old, 52 lbs. per quarter; of the same breed, 3 years and 4 months old, 72 lbs. per quarter. South-Downs, 16 months old, 36 lbs. per quarter;—of the same breed, 3 years and 4 months old, 46 lbs. per quarter.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Who wants a complete set of The Cultivator, from its commencement, 15 vols. bound, and the two volumes of Downing's Horticulturist, now published, and Twenty-five Dollars worth of other books?—It will be seen by reference to an advertisement on our last page, that these are all offered as a Premium to the one who sends us the largest number of subscribers to "The Cultivator," for 1849. Beside this, other Premiums—of Forty, Thirty, Twenty, and Ten Dollars, and many smaller ones, are offered for the next largest lists of subscribers. These Premiums will furnish a Farmer's Library, which any young man may well prize highly; and we hope there will be an energetic competition for them.

Back Volumes.—A few complete sets of The Cultivator from its commencement, bound and stitched, were saved from destruction by the fire, and as we shall soon reprint these volumes, we are prepared to supply all orders for them

Back Numbers.—*All* our back numbers, unbound, of all the volumes, were burnt—consequently we cannot supply any single numbers until they are reprinted.

Return of Mr. Colman.—Many of our readers will doubtless be glad to learn of the return of this gentleman, after having spent several years in writing and procuring materials for his work on "European Agriculture." We understand he arrived in Boston in the early part of last month.

☞ Mr. P. Barry, of the firm of Elwanger & Barry, of the Mount Hope Gardens and Nurseries, Rochester, sailed for Europe last week, for the purpose of visiting the principal nurseries of Great Britain, France and Germany, and will bring home with him in the spring, whatever he finds, which promises to be an useful addition to their already very extensive collection of trees and plants.

Good Corn.—Mr. D. Gaylord, of Gaylord's Bridge, Conn., has sent us a sample of a kind of corn raised by him. It is called the Warren corn, but is similar to the Dutton, or Golden Sioux—has twelve rows to the ear, and less cob, and better shaped ears than is usual with this variety.

☞ We have received from Mr. S. Worden, of Oswego, a sample of a variety of apples which he highly esteems—the name not known. It is of a handsome, round form, and deep red color. The flavor is quite peculiar, but pleasant; the flesh tender and breaking. Mr. W. recommends it for baking. We were prevented from trying it for this pourpose, as they were lost or destroyed in the fire which consumed our office.

We have also received from Mr. D. Hatch, Alstead, N. H., specimens of several kinds of apples, among which are the Pumpkin Russet, or Sweet Russet, Little Pearmain, Newtown Pippin, and a variety not known.

Mineral Paint.—Having had several inquiries in regard to this substance, we condense the following description of it from the *Farmer and Mechanic*. It is said to harden in a few months after its application, forming a perfect enamel or slate, imperishable and capable of resisting fire. It can be had of any color from grey to black. It is called "Utley's Ohio Mineral Indestructible Paint." It is afforded at $4 the hundred pounds. W. H. Starr, 67 Beekman street, New York, is agent for the sale of it.

Apples from Cayuga County.—Mr. Wm. D. Osborn, of Port Byron, Cayuga county, has left us specimens of the Red Bellefleur and Newton Pippin, raised by him. The Pippin is of a larger size than we have before seen of that variety.

Good Corn Crop.—Mr. Ball, of Nassau, informs us that he raised the past season, 86 bushels of corn per acre, on his farm, allowing 70 pounds of ears as equal to a bushel of shelled corn. The plow was not used after the ground was planted—the corn being worked with the cultivator.

Improvement in Working Iron.—Mr. Horatio Ames, of Falls Village, Conn., who is extensively engaged in working wrought iron, has made several improvements in the business, of great importance. Noticing the tendency of iron bars to divide longitudinally, when exposed to heavy pressure, it occurred to him that by twisting them, the tendency of the particles to assume a parallel arrangement, would be prevented, and the liability to separate obviated. He has, therefore, invented an apparatus which effectually performs the work. Tire, for locomotive wheels, of which he makes a great quantity, is subjected to this process, which is found to add greatly to its strength and durability. The plan is equally applicable to the twisting of rails for railroads. Mr. A. has also invented a process for heating or melting iron from the pig, by which he makes a saving of three dollars per ton. He has, besides, made improvements in the mode of hammering iron. He has lately erected, and put in operation, a forge, the cost of which was $50,000, and is probably superior to anything of the kind in this country. The building is 150 feet long and 80 feet wide. The roof, which is of slate, is supported on 38 cast-iron posts, 15 feet long, weighing one ton each. The whole weight of cast iron used in the construction of the building, and in the fixtures for carrying on the business, is 120 tons, and the amount of wrought-iron in shafts, hammers, bolts and braces, is 60 tons. He employs 100 hands—used last year 2,500 tons of pig-iron, and produced $200,000 worth of wrought iron, in the form of tire for locomotive wheels, axletrees for cars and military carriages, shafts for steamboats, &c. With the new works, he will be able to make $1000 worth of work per day, or $300,000 per year, and with a general saving, over the former mode, of one-fifth of the expense.

☞ We understand that Mr. Z. B. Wakeman, of Herkimer, has lately purchased a very superior South Down ram, of F. Rotch, Esq., of Butternuts. We noticed Mr. W.'s sheep in our account of the late show at Buffalo. We presume they will be benefitted by the purchase mentioned. We learn Mr. Wakeman has also purchased a Leicester boar of C. R. Nichols, of Darien, which received one of the premiums at the late State show.

Cattle Medicines.—See advertisement of Messrs. Stimpson & Reed in this paper, for list of medicines prepared by Dr. Dadd, for horses and cattle. Such an establishment, where the simplest remedies for the diseases of animals, prepared by a competent veterinary surgeon, can always be had, will be a great benefit to the farmer.

Agricultural Show at Fredericton, N. B.—We learn that the show held at this place in October last, was in most respects superior to that of former years. Horses, sheep and swine were good, and the show of vegetables very fine. There was a plowing match on the second day, which "went off" well. We notice that our friend J. H. Reid, Esq., of Fredericton, obtained prizes for horses, cattle, sheep, swine, crops and implements.

Wild Potatoes.—It will be recollected that some have recommended procuring wild potatoes for cultivation, on the supposition that they would be more likely to escape the disease. We have in a former number stated that the results of some trials last year showed the produce of wild tubers as much affected with the disease as any. We learn from the English papers that they have been tried the past season, and proved equally affected as before.

Culture of Wheat.—A discussion in relation to this subject by a farmers' club in England, resulted in the following conclusions. 1. *Preparation of the land.* The land to be well cleaned, followed by grass or clover, depastured by sheep. Plowed with a furrow eight to nine inches wide and four inches deep. Heavy land to be as light as possible at the time of sowing, and light land to be made as heavy as possible. 2. *Time of sowing and quantity of seed* to be regulated by the season and the state of the land—early in the season nine pecks per acre, and more as the season advanced. 3. *Treatment of the crop.* The crop to be kept clean, and to be rolled in the spring with one of Crosskill's clod-crushers. 4. *Time of reaping.* Early reaping—grain not allowed to get ripe before being cut. The soil to which the discussion referred was described as of a lime-stone character. It is not stated whether a subsoil plow was to be used, or whether a greater depth of furrow than four inches was made at any time. We presume there is but little, if any land devoted to wheat in this country, where so shallow plowing would be advisable.

Bees without stings.—The inquiry is often made whether there are bees without stings. We are not able to say where any of this species can be found at the present time. The late Dr. James Thatcher, of Plymouth, Mass., in a letter published in the *New England Farmer*, in 1830, describes some of these curious insects then in possession of the late Dr. Hosack, of Hyde Park. He says, "Dr. H. is now in possession of a family of bees without stings, which were sent to Dr. Mitchell from Mexico. He keeps them in his green-house that they may enjoy an atmosphere similar in temperature to that in their native climate."—Can any one give us any information in regard to these bees?

Prophecy.—The Hon. John Lowell, in an address before the Massachusetts Society for promoting Agriculture in 1818, made the following remarks in reference to the connexion of chemistry with agriculture. They evince the wisdom and sagacity of an able mind. "There are few persons who have read the late able and interesting work on agricultural chemistry, by Sir Humphrey Davy, who do not perceive its intimate connexion with this important art, or who do not feel a prophetic conviction of its future usefulness." Mr. Lowell went on to say that though he regarded this as a subject with which the practical farmer need not trouble himself, lest he should become "confused and bewildered," yet he thought there was "reasonable ground of hope, that men of leisure and science would be led to more accurate and philosophical views of agriculture, and that from their experiments, their neighbors would derive great ultimate advantage."

Leaves for litter and manure.—Leaves of trees furnish the best of bedding for pigs. A good thickness of them enables the animal to cover himself completely and he sleeps warm and comfortably under almost any degree of cold. They make a good and convenient litter for horses or cattle—readily absorbing the liquids, and at the same time affording a soft and clean resting place for the stock. A covering of them affords an excellent winter protection for plants, and they also make a valuable compost for plants that will not bear the salts of animal manures. A mould prepared by mixing old grass turf and leaves, well rotted, is known to be excellent for many gardening purposes.

Now is a good time to gather leaves, and people living near woods free from under-brush, can readily procure them, in any quantities. The winds frequently collect them into piles, in vallies, and along the sides of fences, where they can be easily collected and carried to the farm-yard in carts or waggons. They may be deposited for use, as needed from day to day, in any spare corner of an out-building, or thrown into a slight pen made of boards or rails, and kept dry by boards over the top.

How much Lime ought a soil to have?—Prof. Johnston considers that a proportion of lime is indispensible to the fertility of a soil. He thinks that the proportion of three per cent. of the carbonate, (or common lime-stone,) is not too much, and that there are not many cases in which it would be advisable to increase the quantity beyond six to ten per cent., provided, the carbonate is in a sufficiently minute state of division.

"Book Farming."—Samuel Williams of Waterloo, says, "I know a farmer, who has paid over $300 for a private library, and who takes both the *Albany Cultivator* and *Genesee Farmer*. In proof that he is something more than a theoretical farmer, he sold the surplus products of his farm last year for over $1400, and he paid out of the same but $90 for hired help—he has no children old enough to work in the field. It is hardly necessary to say that he is fully up to the improvements of the age."

Large Dairy.—Col. Meacham, of Pulaski, N. Y. had a farm of 1,000 acres, 300 in grass, keeps 97 cows and made one year 30,000 lbs. of cheese. He raised yearly 2,000 bushels of carrots for his cows, and gatherd 300 bushels of grass seed.

Big Corn Fields.—H. L. Ellsworth, late commissioner of patents, has a thousand-acre corn field, yielding 60,000 bushels of corn, in the Wabash valley. Other fields, amounting to 5,000 acres, are adjoining.

The Season and the Crops in New-Hampshire.

"The harvest is past," and the fruits of the earth are gathered in. A retrospect of the past year, at the present time, may be of advantage as comparing one year with another, and different localities with each other, and as forming a record to which reference may be had in after years.

The last winter was remarkable in this region for mildness. January 1st, there was no snow, and no frost in the ground. There was much rain, some snow, a few days of severe cold, and but few weeks sleighing during the winter. April was dry, but May was remarkably wet, it being rainy nearly half of the time. This delayed sowing and planting, but was of great advantage to grass, for without it the hay crop would undoubtedly have been very light, owing to the unfavorable winter. Planting was not completed before the first week in June. The first and second hoeings were crowded together, and done in haste, as we were obliged to commence haying early. The weather was favorable, and the crop, which was unusually large, was secured in good order.

Wheat blighted badly, some pieces not worth harvesting. It was also injured by the worm, *Cecidomyia tritici*, in the head. A very light crop. Oats good, and the grain heavy. Corn that was planted late was injured by the early frosts in September, but in general there is an average crop. Potatoes good, and but little diseased, though in parts of Merrimack and Belknap counties we hear the disease is prevalent, and very destructive. Peaches and plums none, and of apples there is a limited supply. W. L. Eaton. *East Ware, N. H., Nov.*, 1848.

Agricultural Exhibition in Canada West.

The third meeting of the Provincial Agricultural Association of Upper Canada, took place at Cobourg on the 5th, 6th and 7th of October last. The unfavorable state of the weather during the days on which the entries were required to be made, prevented much stock and many articles from being brought forward. Still the show is pronounced creditable to the cause of agricultural, mechanical and general improvement. Durham cattle from the herd of Hon. **Adam Fergusson**, and Devons from **Richard Gapper**, Esq., are mentioned as being very fine. The show of implements was quite large. Several of the exhibitors were from "the States," among which were Messrs. **Emery** of Albany, and **Rapelje & Briggs** of Rochester. There was a good display of horticultural products, among which some samples of grapes were pronounced of superior quality.

Crops in East Tennessee.

The great improvement in farming in this valley of East Tennessee is truly gratifying. Many old fields which have been turned out for years, are now under fine cultivation.

The farmers are now gathering their corn, which crop is most abundant. The wheat and oat crops were remarkably fine for this country. Wheat is now worth from 40 to 50 cents per bushel; corn, owing to its great abundance, will range one shilling to twenty cents this fall. There has been introduced among us, within the last two years, a variety of wheat called by some the Quaker wheat, by others the Mediterranean, which is decidedly preferable to the wheat we have used here for many years. Our wheat crops are often destroyed by the Hessian fly in the fall, or rust in spring. The Quaker wheat is never destroyed by either, and is therefore considered the more valuable. The grain is much larger than that of the Walker or Orleans wheat, but the flour is not quite so white. **Sam. T. Bicknell.**

Printed Circulars.

The other day a *sealed* note came from the post office, marked 10 cents. On opening it, not even the dot of a pen was visible on the inside, for it was a PRINTED CIRCULAR, which if left open as it ought to have been, would have drawn only two cents. Gentlemen, either save your wafers or prepay the postage. X

Climate South.—Dr. Lee says that 9 inches of water have fallen in Savannah, in 3 successive days—that the mean temperature of the earth is 20 degrees greater in Georgia than in Western New-York—and that so much greater there is the growth of corn, that 16 to 25 square feet are required for the growth of each stalk of corn in the field.

Constituents of Wheat.—Professor Johnston found, according to analyses, that so far as the *fat forming principle* is concerned, that *bran* for a given weight, is the richest, and that the whole grain ground together is nearly one-half richer than fine flour. As to *muscle-forming* matter, the whole grain is to fine flour as 156 to 136.

Analysis does not, however, always show the actual comparative value, as some parts are assimilated much more readily than others—and the same food sometimes becomes twice as valuable by a different preparation.

One-horse Carts.—A great improvement has been made in attaching the horse to a horse cart, to prevent the sudden descent of the weight of the load upon the animal's back, after mounting obstructions. A half elliptic spring is fastened under each shaft, the centre of which is connected to the lower ends of the staple, which passes freely through a hole bored in the shaft, and connects with the chain that passes over the back of the horse.

AN ACROSTIC.

The Cultivator of "the soil and mind."
His course well chosen, cannot fail to find,
"Excelsior" his motto, well defined

Cheer'd on by honest labor's rich rewards,
Unawed by fortune's frowns, as Nature's LORDS
Let cultivators still their course pursue,
To "improve the soil," as they are *bound* to do—
It soon will be acknowledged as a right,
Viewed in a practical or scientific light:
As right, in honoring all the men of toil—
To honor most, improvers of the soil:
Our duty, then, should be delayed no later—
Respect our rights, and *take* The Cultivator.

Respectfully submitted by W. L. Eaton.

East Ware, N. H.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Nov. 15, 1848.

FLOUR—Genesee per bbl. $5.44*a*$5.50. Fancy brands, $5.62½*a*$5.87½.

GRAIN.—Wheat, Genesee, per bu., $1.25*a*$1.27—Corn, Northern, 70*a*74 cts.—Rye, 66*a*67c.—Barley, 62½*a*65—Oats 33*a*34c.

BUTTER—Best, per lb., 19*a*20c.—Western, dairy, 12*a*15c.—Ohio, 9*a*11c.

CHEESE—per lb., 6*a*7½c.

BEEF—Mess, per bbl., $9.25*a*$10.—Prime, $5.25*a*$5.50.

PORK—Mess, per bbl., $12.62½—Prime, $9.

LARD—per lb., 7½*a*8c.

HAMS—Smoked, per lb., 6*a*8½c.

HEMP—American dew rotted, per ton, $155*a*$160.

TOBACCO—per lb., Kentucky, 3½*a*6c.

COTTON—Upland and Florida, per lb., 5½*a*6½c.—New Orleans and Alabama, 5½*a*7½c.

WOOL—Prime or Saxon fleeces, washed, per lb... 35*a*40 cts
American full blood fleeces,.............. 31*a*33 "
" half blood...................... 26*a*27 "
" one-fourth blood and common,.. 23*a*25 "

WHOLESALE & RETAIL.
ALBANY AGRICULTURAL
WAREHOUSE & SEED STORE
H. L. EMERY.

ALBANY AG. WAREHOUSE AND SEED STORE,

Removed from stand No. 10 and 12 Green-street, to the spacious new store No. 369 Broadway—a few doors South of the Post-Office, Albany, N. Y.

THE subscriber, being a sufferer from fire, in common with a large portion of the citizens of Albany, (having lost his store and stock, on the morning of the 29th of Oct. last,) has secured for a term of years the new and extensive store, No. 369 Broadway, or old Market-street, a few doors south from the P. O. This store being 145 feet deep, and four stories high, is much larger than his former one,—and running through from Broadway to the canal basin—Broadway being the principal thoroughfare in the city, between the Boat Landings and Depots, the location is readily found. These advantages, with the increased facilities, will enable him to transact many times the business heretofore done by him, and more convenient for the trade generally

In connection with these changes, he is erecting an extensive manufactory in the central part of the city, sufficiently large to accommodate over 100 mechanics, and a proportionate amount of labor-saving machinery, which will enable him at all times to execute all orders with despatch. And he solicits the continuance of that very liberal patronage heretofore bestowed upon his establishment.

H. L. EMERY.

N. B. It is his intention to establish branches at Rochester and Buffalo the coming spring, each to be under the charge of experienced brothers of the subscriber.

LIST OF AGENTS FOR THE CULTIVATOR.

(Concluded from page 359.)

NEW JERSEY.

Augusta, W. H Roe
Burlington, Thos. Hancock
Bridgeton, J. B Potter
Crosswicks, P. S. Bunting
Carpenter's Landing, Thos Heritage
Colts Neck, H. Buck
Camden, B. W. Cooper
Columbus, J. W. Wright
Deerfield, A Padgett
Englishtown, W. D. Reid
Fairton, G. S. Whitecar
Flemington. J. K Demet
Glassboro, T. H Whitney
Greenwich, B. Sheppard
Griggstown, A. Van Doren
Howell Works, A. Lafetra
Jacksonville, S. T. Duffy
Kingwood, J. T. Risler
Lesser Cross Roads, Jos. Nichols
Metuchin, Wm. M. Ross
Mendham, D. B. Williams
Medford, Geo. Haines
Millville, F. L. Mulford
Mount Holly, G. W. Parker
Moorestown, C Stokes
Middletown Point, N. Hillyer
Madison, Wm. J Britton
Middletown, Thos. Roberts, Jr.
Newark, Ritchie & Eadie
New Market, Abel Vail
New Brunswick, H. Smalley
Newton, J. R. Pettit
New Vernon, S. Lindsey
Perth Amboy, Jas Parker
Plainfield, W. W. Cornell
Princeton, Jas. Carnahan
Paterson, John Home
Quakerstown, T. Probasco
Rancocas, H. W. Wills
Rahway, J. Shann
Roadstown, R. Fithian
Shiloh, A. Muich
Squankum, H H Wainwright
Spotswood, John D. Outcalt
Shrewsbury, J. Corliss
Stewartsville, Wm. S Kase
Sergeantsville, J. Lessey
Trenton. D. K. Schenck
Tom's River, W. McKean
Tinton Falls, Thos Guest
Woodbridge, E. I. Jacques
Yardville, J. J. Woodward

PENNSYLVANIA.

Allegany City, Chas Anderson
Abington Centre, S. Tillinghast
Allentown, D. C Freytag
Addison, Robt. Hunter
Athens. Sam'l Ovenshire
Bethlehem, C. C. Tombler
Brownville, J. L. Bowman
Berwick, Rev. J H. Young
Bethany, E. W. Hamlin
Brooksville, John Bullers
Byberry, E. Croasdale
Bristol, Sam'l Hulme
Butler, A. M. Evans
Beaver Plain, D. Minis
Bridgewater, A. Stackhouse
Bloomsburgh, Geo. Yost
Beallsville, W J. Hill
Chambersburgh, B. Chambers
Centerville, A. Cornell
Carlisle, Sam'l Myers
Canaan, D. Swingle
Cattawissa. Wm. I. Eyer
Chanceford, Jas. S. Fulton
Conneautville, Chas. B. Power
Colebrookdale, J. Schultz
Curwinsville, John Miles
Coopersburgh, C. Wittman
Connellsville, Jos Herbert
Dundaff, J. Mc. Alla
Darlington, John Smart
Danborough. Chas. Smith
Equinunk, Wm Weston
Eastbrook, Wm McCoslin
Easton, H. W. Crosby
Erie, T. Moorehead, Jr.
East Smithfield, Allen Hale
Elkland, Thos. Allen
Fairview, M. Barnett, Jr.
Farmington, John Detwille
Friendsville, Sam'l F Carmalt
Fayetteville, John Darby
Forkston. E Fassett
Greensburg, D. Weltz
Gap, Jos. Brinton
Honesdale, G. L. Griffing
Hanover, Peter Forney
Hulmeville, A. N. Scott
Herriottsville. Jno McEwen
Hamlinton, B. Hamlin
Hartbgig. Geo. Siddall
Harbor Creek, C. Leet
Harveys, S. Harvey
Hopewell Cotton Works, E. J. Dickey
Huntsville, D J Whiteman
Harewood, Wm. Main
Horn Brook, Wm. J. Delpueck
Hill Top, O Stevenson
Harford, P. K Williams
Jefferson, John Cotterell
Kingston, E Hoyt
Kulpsville, C. L. Wampole
Kinzers, A. L. Henderson
Lancaster, G. Baker
Lewisburg. S. F. Lyndall
Lahaska, Wm. Staveley
Leighton, Ed. Weiss
Lawrenceville. W. Kilburn
Lewiston, L T. Mattson
Lumberville, Wm. J. Jewell
Leraysville, E. Marsh
London Grove, J. P. Swayne
Mauch Chunk, Sam'l. Lippincott
Maiden Creek, Jos. Wright
Muncy, B. M. Ellis
Marshalton, John Worth, Jr
McConnellsville, R M. Denig
Meadville, M H Bagley
Montrose, H. J. Webb
Morrisdale, Sam'l. Waring
Mount Morris, Levi Anderson
Millardsville, O. T Kinney
Mechanicsburgh, A. Babb
Mount Republic, S. E. North
Mehoopany, Geo. Whipple
Newtown, A. Cornell
Newportville, A. M. McIlvaine
Newtown Square. L. Brooks
North Whitehall. E. Kohler
North East, Jos. McCord
New Castle, Geo. Pearson
New Milford, J. P. Harding
Newville, W. H. Woodburn
Newburgh. J Au.
Norristown, D. N. Mulvany
Oley, Dr. P. G. Bertolet
Ottsville, R. C. Weaver
Philadelphia. G. B. Zieber & Co
Pottstown, Owen Stover
Pineville, J. Simpson
Perryopolis, Pierson Cope
Pleasant Mount, O. Stevenson
Pleasant Valley, J. M. Sands
Priceville, M. Mogridge
Pleasant Unity, Alex. Culbertson
Piqua, T. W. Henderson
Pike, D. Lobach
Prompton, Hon. V. Grenell
Pittsburgh, M. P. Morse
Rileysville; M. Tomlinson
Ruchsville, D. Troxel
Reiglesville. Jas. W. Long
Reedsville, Chas. Colfelt
Ryerson's Station, J. K. Loughridge
Richborough, Jos. Thompson
Shippensburg, Fridley & Kelso
Selona, Wm. Fearon, Jr.
Starrucco, Hon. J. Mumford
Setzlers' Store, Dr. A. Bush
South Sterling, Rich. Lancaster
Shepherdstown. D. Sheffer, P. M
Strawntown, W. Dennis
Steeleville, Joshua Wood
Spring Creek, S. Eaton
Springtown, D. W. Hess
Stroudsburg, F. Starbird
Tarentum, D. McLain
Thompsontown, Jos. Kurtz
Tioga, Wm. Lowell
Tunkhannock, Geo. Leighton
Uniontown, A Hadden
Upton, John McClelland
West Alexander, G D. Whitham
Warren, N. Sill
Wyalusing, H. H. Wells
Waynesburgh, J. Higginbotham
Waymart, Jas. R Keen
Wyoming. Chas. Denison
Wilkesbarre, O. Collins
Waterford, C. Mitchell
West Greenville, Jas. Stevenson
Womelsdorf, Wm. D. Robeson
White House, E. Line, Jr.
Wellsboro, D. Hisie
West Chester, T. B. Beaumont
West Grove, J. L. Gatchell
White Haven, Thos. Morrison
York, D. Small
Yardleyville, Rev. C. Wiltberger

DELAWARE.

Delaware City, C B. Reybold
Dover, W. W. Morris
Loveville, Steph. Springer
Middletown, T. V. Ward
Newcastle, John Pattison
New Garden. John Pegle
Smyrna, A. Jones
Summit Bridge, J. A Lune
Wilmington, Jas La Roche
Whiteleysburg, E. W. Cooper

MARYLAND.

Annapolis, Thos. J. Mesick
Bakersville, A. Rench
Brick Meeting House, P. M. Steele.
Baltimore, Sam'l. Sands
Bladensburgh, Chas. B Calvert
Cockeysville,, Jno. D. Mathews
Centreville, John Tilghman
Churchville, Wm Finney
Catonsville, J H. Ferguson
Darnestown, L. W. Candler
Ellicott's Mills, Dr. W. Denny
Emmittsburg, Dr J. A Short
Euston, Ed. M. Dawson
Fredericktown, J. A. & D. C. Johnson
Frederick. F. A. Rigney
Golden. Thos. H Matthews
Harmony, P. Wellered
Harrisonville, H Fite
Hopewell X Roads J. Heltechkell
Laurel, Col H. Kelton
Little Gunpowder, Jas Reynolds
Long Green Academy, R. Agnew
New Windsor, Dan'l Engel
Owing's Mills. D. Carlisle
Pomonkey, L. Marbury
Pikerville, Gen B. C. Howard
Petersville, John Lee
Port Deposite, A Anderson
Princess Ann. Wm. T. G Polk
Queenstown, C. C. Tilghman
Reistertown. F. Anderson
Sharpstown. Ed. Burford
Sykesville, Jas. Sykes. P. M.
Sandy Spring. Dr. W. P. Palmer
St. Michaels, S Hambleton
Taneytown, Alex McAlister
Triadelphia, E. Riggs
Trappe, M. Goldsborough
Upper Marlboro, G. W. Graham
Utica Mills, Wm Todd
Vienna, Wm. S. Jackson
West River, Dr. John B. Owens
Walkersville, J. Walker
Wye Mills, W. Rose
Wiseburgh, C E Berrondy

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Washington, J. F. Callan

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Alexandria, Bell & Entwisle
Amelia C. H., W. Harrison
Abingdon, Thos. Findlay
Anandale, Wm. Garges
Aylets, Ed. Hill
Buffalo Forge. W. Weaver
Blue Ridge, Jeremiah Star
Brandonville, Wm. Robertson
Barboursville, J. B. Newman
Barter Brook. D. S. Bell
Bowman's Mills, J. C. Bowman
Bridgewater, Jno. Dinkel, Jr.
Charlemont, Sam'l. G. Davis
Culpepper C. H., E. B. Hill
Carter's Bridge, Geo. Rives
Camp Mills, Col. Jos. Howard
Clifton Forge, E. Jordan
Coopers, J. S. Hale
Cardsville, J. W. A. Saunders
Conrad's Store, J. E. Harnsberger
Chuckatuck. J. Bunch
Christiansburg, E. Phlegan
Charlottesville, R. W. N. Noland
Cedar Grove Mills, W. W. Davis
Campbell C. H., E. C. Jordan
Chesterfield C. H., R Flournoy
Coal Mines, Dr. Wm. H. Johnson
Clear Branch, L. L. Waterman
Dover Mills, R. Wood
Dayton, Henry Thomas
Davis' Store, Richard Davis
Dinwiddie C. H., J. W. Gilliam
Davis' Mills, P. Preston
Drurysville, Geo. B. Cary
Dickenson's Store, W. Dickenson, Jr.
Elon, Jas. Robertson
Everettsville, Benj. H. Magruder
Fancy Hill, W. Weaver
Fincastle, Jas. S. Walroud
Front Royal, R. M. Marshall
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Franklin, Wm. McCoy
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Goodwynsville, D. W. Brodman
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Harrisonburgh, J. Hardesty
Hunterville, Jas. A. Price
Hermitage, N. Whitmore
Hampton, J. B. Cary
Haymarket, Dr. C. C. Marsteller
Jacksonville, Jos. Williams
Jefferson, D. B. Steger
Kanawha Salines, Capt. A. L. Ruffner
Kearneysville. Dr. Hoffman
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King & Queen C. H., R. Pollard, Jr.
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Liberty, A. B. Nichols
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Lock Lomond, J. C. Rutherford
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Lovington, C. T. Estes
Leesburgh, Chas. H. Lee
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Mathews C. H., Dr. W. Shulties
Middleburg, C. Powell
Martinsburg, Jos. Hoffman
McGaheysville, J. Ammon
Mount Clinton, J. Warren
Middlebrook, Jno. T. Randolph
Millwood, John E. Page
Milford Mills, Rev. J. Towles
Manchester, A. B. Bott
Moorefield, M. W. Gamble
Mint Spring, A. Swink
Mount Sydney, R. S. Harnsberger
Mathewsville, A. G. Mathews

Newbern, John C. Dart
Newville, Dr. W J. Harrington
New Market, S. P. Henkel
New Hope, Geo. W. Mowry
Occupacia, J. M. Garnett
Occoquan, H. Holland
Pursel's Store, S. B T. Caldwell
Port Republic, S. Harnsberger
Pedlar Mills, Wm. B. Rucker
Petersburg, E. H. Osborne
Pleasant Gap, T. M. Walton
Parkersburgh, M. Chapman
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Ruckmansville, S. Ruckman
Rose Mills, Dan'l Warwick
Retreat, J. S. Callaway
Stafford C. H., S. S. Brooke
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Sheetz Mills, R. K. Sheetz
Staunton, S. F. Christian
Sharon, Jas. W. Grayson
Stoney Creek Warehouse, A Aldridge
Toms Brook, Jno. Rhoades
Thompsonville, Geo. Ficklin
Tye River Mills, Dr. T. Massie
Triadelphia, S. D. Favis
Taylorsville, Col. T Mc Cabe
Timberville. John Driver
Tye River Warehouse, J. B. Mc Lelland
Upperville, C. Powell
Variety Mills, C. F. Estes
Wheeling, Wm. Gregg
Wellsburgh, R. Mirchland
West Liberty, W. Irwin
Warrington Springs, J. G. Bradford
Warrenton, Geo W. Brent
Winchester, H F. Baker
Waynesborough, John Bush
Warren, R. Pollard
Wilmington, S. Stillman
Williamsburg, S S Griffin

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Brummells, A. F. Harris
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Concord, Jas. H. Walker
Cedar Hill, Sam'l W. Burns
Catawba Spa, W. P. Bynum
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Fair Grove, C. Mack
Fayetteville, D. R. Bell
Fort Defiance, Ed. W. Jo
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Gilopolis, John McEachen
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Gravelly Hill, H. W. Beatty
Henderson, Prof. E. A. Jones
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Halifax, H. K. Burgwin
Hillsboro, Wm Cain
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Kirkland, E B. Burns
Limestone, A. Pearson
Lexington, W. R Holt
Lincolnton, C. C. Henderson
Long Creek, J. F. Robitzsch
Murfreesboro, S. J. Wheeler
Milton, A. J Walker
Moffit's Mills, John Pope
Marley's Mills, T A. Feuteral
Mosely Hall, Jesse Lassiter
Newbern, Geo S. Attmore
Nashville, N. W. Boddie
Oxford, Col. L. Gilliam
Pioneer Mills, J. C. Sosserman
Pullocksville, A L. Simmons
Roanoke. Jos. J. Pugh
Raleigh, W. White
Rockingham, S W. Covington
Rocky Mount, Wm. S. Battle
Red Plains, [illegible]
Smithfield, Dr. A F. Telfair
Salisbury, Wm Locke
South Mills, Wm Old
Swansboro, Ed. Hill
Topsail, J. D. Jones
Tarboro, Robt. Norfleet
Williamsville, Alex. Williams
Watson's Bridge, Wm Watson
Williamston, J S Yarrell
Westminster. Wm. S. Beard
Wilmington, W. A Wright

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Blackville. W. S. Reynolds
Beaufort, B R. Bythewood
Charleston, Sam'l Hart, Sr.
" Jno. Russell
Catourah, J. H. Cleveland
Cheraw, E. B C. Cash
Columbia, W. W Purse
Damascus, Capt. G A Fike
Edgefield C H., E J. Mims
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Monticello, W. J. Alston
Nation Ford, A White
Newberry, R Stewart
Pliney, B. F. Stairley
Pocotaligo, Rev. J B. Dunwody
Pendleton, J. B Sitton
Pomaria, Wm. Summer
Stoney Point, J Stacey
Society Hill, W H. Evans
Terryville, J E. Calhoun
Woodruff, Col. J M Crook
Winnsboro, S. P. Thomas

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Athens. P. Clayton
Birdsville, J. V. Jones
Blakely, Joel W. Perry
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Carsmith, J. Hilsman
Culloden, Prof. J. Darby
Elberton, B. Burch
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Iron Works, M. A. Cooper
Kingston, John Lewis
Knoxville, Sam'l. Rutherford
Lincolnton, Jos. P Wing
Macon, A E. Ernest
Madison, John S. Walker
Marietta, E Denmead
Mulberry Grove, W. G. Walker
Milledgeville, G. L. Deming
Mount Zion, Robt Walcott
Mayfield, Thos. Jones
Petersburgh. J. D Watkins
Prattville. Geo. A. Winn
Roswell, N. J. Bayard
Savannah, Dr. Wm. H. Cuyler
Sparta, J. H. Burnet
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Van Wert, D. Clopton
Washington, Dr. F. Fickler
Zebulon, H. G Johnson

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Columbus, H Stevens
Edward's Depot, Dr. M. W. Phillips
Gallatin, E R. Brown
Grand Gulf, Col. Wm. Bridges
Gholson, R Morris & Co.
Holly Springs, Wm B. Lumpkin
Liberty, Hon. John Wall
Lexington, W. J. Holloway
Lockhart's Store, C. T. Murphy
Malcolm, B D. Knapp
Mount Pleasant, F. Hitchcock
Natchez, Wm. H. Fox
Oxford, M Peques
Okachickama, T. Hardeman
Olive Branch, F. T. Paine
Raymond, C. W. Le Grand
Vicksburg, R. Y. Rogers
Waterford, L. Cole
Wheeling, Gen. D. Davis
Whitesville, D. L. Phares

ALABAMA.

Berrien, S. Ruffin
Eufaula, J. W. Rains
Forkland, Wm. C. Sorsby
Gainesville, Col. Carleton
Hayneville, M. Smith
Jacksonville, Jas. M. Crook
Lockland, Dr Cloud
Mobile, R. North & Co.
Montgomery, J A. Lamar
North Port, John Bells
Pleasant Hill, Thos. Broughton,
Suggsville, Dr. A. Denny
Tuscaloosa, W. D. Marrast
Warrior Stand, J. C. Henderson

TENNESSEE.

Bolivar. C. Jones
Blair's Ferry, A. S. Lenoir
Crossville, Benj Bentley
Chattanooga, D K Rawlings
Calhoun, H. McD. McElrath
Campbell's Station, Col. G. W. Maboy
Durhamville, Wm. T. Buck
Franklin College, T. Fanning
Facility, J. T. Lenoir
Franklin Wm P. Campbell
Four Mile Branch, Chas M. Mc Ghee
Graysburg, Col. D Bright
Greenville. Eph. Link
Hardimans X Roads, J. S. Claybrook
Hill's Valley, J. B. Hill
Harrison. A. C. Richard
Jackson, G Adamson, P. M.
Kingston, J. Y. Smith
Knoxville. P. M. McClung
Leesburgh, J. McPherson.
Lenoirs, Wm B. Lenoir
Memphis, A. W. Flinn
McMinnville, A M. Stone
Maryville, S. T Bicknell
Nashville, Wm. Scruggs
Philadelphia, W. F. Lenoir
Purdy, A. Denney
Russellville, Dr. L Broom
Sweetwater, Robt. Smead
Shelbyville, Thos. C. Ryall
St. Clair, J. Hoffmaster
Savannah, Wm Davey
Waynesboro, Jas. Anderson.
Winchester, P. S. Decherd

ARKANSAS.

Choctaw Agency, T. McKinney.
Eldorado, Wm. V. Tatum
Fort Washita, Rev. W. Browning
Fort Towson, L. Garland
Hillsboro, Wm. Gorman
Sylvia, Rev. Evan Jones
Ultima Thule, L. G. Harris
Wheelock, H K. Copeland
Wilmington, Jos. B. Jones

LOUISIANA.

Alexandria, H. M. Hyams
Assumption, Col. G. Beazley
Bringiers, R. McCall
Cheneyville. Hugh Caslin
Cloutiersville, Robt. McAlpin
Donaldsonville, R. McCall
Jackson, D. McCanto
Kisatchie, Thos. Brown
Manchac, Dr Romer
Mansfield, J. J. B. Prudhomme
Monroe, Dr. John Calderwood
New Orleans, B. M. Norman
New River, S. Tillotson
Natchitoches, S. M. Hyams
Parish St Charles, J G. Wilson
Point Coupee, S. J. Cooley
Union, J. S. Hanna

FLORIDA.

Flemington, P. Dell
Key West, J. B Browne
Mandarin, J. L. Hamilton
Marion, J. C Johnston

TEXAS.

Lavaca, F. & J. Beaumont

MISSOURI.

Boonville, Jas. R. Hammond
Carondelet, H. A. Stine
Dover, G C. Spears
Fee Fee, J. Quisenberry]
Georgetown, Amos Friston
Jackson, Jos. W. Russell
Jefferson City, Jas. L. Minor
Lexington, C. Patterson
Middle Fork, Jas Flore
Rock Hill, C. Armstrong
Sarcoxie, W. C. Wilson & Sons
St. Louis, Plant & Brother
" E. P. Pettes
" H Paddleford

KENTUCKY.

Bowling Green, J. J. Youngloves
Bedford. N. Parker
Colbyville. S D. Martin
Ghent, J. Smithson
Henderson, Mr. Hillyer
Lexington, C. J. Sanders
Louisville, Geo. W. Noble
" A. G Mann
North Port, Wm S. Lindsey
Nicholasville, T. Woodson
Owensboro, Jas. Weir
Piketon. J. N. Richardson
Richmond, C. Turner
Shawnee Run, J. R. Bryant
Smithland, W. Cowper
Stanford, Arch. Leavell
Versailes, Wm D. Young
Vanceburg, A. Thompson

OHIO.

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Alexandria, W. M. Dawes
Andover, F. Crearey
Auburn, A. E. Barnes
Bainbridge, A. M. Marshall
Bloomingville, H. Beeken
Brookfield, Jas Fowler
Bristolville, L. B. Maltby
Braceville, F. E. Sow
Burlington, S. M. Browning
Bowling Green, Dr W. R. Peck
Brandy Wine Mills, W. Foster
Berlinville, Jas. Otis
Chillicothe, W. M. Anderson
Cincinnati, Jos B. Russell
Cleveland, F. R. Elliott
Columbus, Dr J. G. Jones
Claridon, C. L. Taylor
Cuyahoga Falls, H. B. Tuttle
Circleville, Geo. Doney
Chester, W. Sherwood
Cherokee, W. H Funk
Canfield, J. M. Edwards
Cleves. Wm. H. H. Taylor
Canal Dover, G W. Slingluff
Carthage, H. C. Morris
Dover, C. H. Tobey
Duncan's Falls, S. Sturgis
Dayton, Sam'l. Teagus
Delaware, Jos. Cellar
Ellsworth, Jos. Coit
Euclid, C. T. Graves
Elyria, G. M. Chapman
Elliottsville, Wm. B. Sloane
East Euclid, L. I Pelton
East Claridon, H. Armstrong
Eaton, Jas. G Fanning
Etna, N P. Atkinson
Fitchville, M. E. Mead]
Fredonia, Geo. P Howell
Greenfield, J. M. Beers
Gallipolis, John Hoy
Garrettsville, J Wright
Granville, A. P. Prichard
Gustavus, Geo Hezlep
Greensburgh, N Coleman
Gambier, M. White
Grand Prairie, T. C. Fitzhugh
Hartford, S. A. Bushnell
Howland, D B. King
Hillsboro, Jas M. Trimble
Hudson, H. Baldwin
Huron, P. Adams
Hubbard, A. J. Mear
Jefferson, E Wood,
Johnstown, E. Follett
Kinsman, Jno. R. Stanhope
Kingsville, C. Terrill
Kirtland, A C. Russell
Lancaster, J. M. Bigelow
Leroy, J. Phillips
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Lyme, T. D. Porter
Lenox, J. Atkins
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Lebanon, C. Halloway
Marion, W. L. Kendrick
McCutchenville, Geo. Myers
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NewPhiladelphia, F D Leonard
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Newark, H. S. Sprague
Newbury, J. Allshouse
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Painesville, S. Smith
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Roseville, J. I. Ford
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Randolph, O C. Dickinson
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Short Creek, W. Maddox
Sycamore, D Cowgill
South Charlestown, Jon. Pierce
Southington, D. Maltbee
Salem. Jos. Wright
Springfield, J. T Warder
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Springdale. A. A. Mullett
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Tiffin, Wm. Randall
Ty o, J. J Metcalf
Troy. P A Smith
Tallmadge, P. C Stone
Urbana, J. Funk
Uhricksville, John Barker
Vienna, S H. Reed
Vienna X Roads, W R. Webb
Walhonding, J. Johnson
Warren, Jas Haslett
Weathersfield, S. W. Fee
Whiteford, S. B Worden
Wadsworth, Geo. K. Pardee
Wayne, John Kennedy
Willoughby, W. Penfield
Westerville, J. W. Copeland
West Liberty, Jas. W Brown
Watertown, D Deming
Waterford, Chas Peters
Wakeman. L. T. Farand
West Milton, S. Teague
Yellow Creek, B. Thompson
Xenia, Jas. Jenkins
Zanesville, Jas. L Cox

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Elkhart. Geo. W. Tibbetts
Indianapolis, Abner J. Pope
Jackson Prairie, S. B. Jackson
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Knightstown, F. L. Goble
Lafayette, C. Fink
Lima, M. Averill
Laporte, Jas. Grierson
Madison, Thos. B Spilman
Michigan City, Geo. Smith
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New Harmony. John Beal,
New Albany, D. Hedden
Orleans, John F. Kimbley
Princeton. D. Mills
Rockville. P Mitchell
Richmond, Jos. V. Plummer
Romney, H. Daming
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Vincennes, L. C. Langton
Vevay, Jos. Walton
Wilmington, Geo. Cornelius

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Ava, John Burrill
Beardstown, E. R. Gillett
Boon Grove, A B. Price
Belleville, L. V. Hooper
Bristol, S. B. Craw
Como, F. Cushing
Chicago, Griggs, Bross & Co ; Booksellers
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Cazenovia, M. L. Dunlop
Chesterfield. S. Hopson
Dundee, J. A. Carpenter
Dixon, John Shillaber
Elgin, N. E. Duggett
Franklin Grove, N Whitney
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Farm Ridge, E Baldwin
Geneseo, H C. Sleight
Godfrey, Benj. Godfrey
Granville, R. Ware
Galena, Jos. N Waggoner
Harding, H. H. Marsh
Jonesborough, W. Willard
Kendall, E. S. L. Richardson
Long Grove, Oran Ott
Lee Centre, E. L Clapp
Lewistown. Steph. Dewey
Lockport, E E Bush
Little Fort, Thos Reid
Middletown, J. Simmons
Ottawa. John Hise, P. M.
Paddock's Grove, G. Flagg
Point Republic. J. T. Bullock
Princeton, C. Bryant
Panther Creek. J. B. Shaw
Plattville, P Halleck
Paris, M K. Alexander, P. M.
Quincy. L. Bull, Jr.
Rockton, P. Bird
Sparta, J. L. Brown
Springfield, F. O. Leffingwell
Union Point, Ed. Mackinder
Upper Alton, Benj. F. Lang
Vermillionville, J. F. Little
Woodburn, Wm. H. Rider

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Armada. Geo Andrews
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Bellevue, S. Andrus
Bainbridge. Steph. H Meech
Crockery Creek, W. Hathaway
Centreville, Geo. Talbot
Clinton, Geo. Dell
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Dexter, Hon S W. Dexter
Eaton Rapids, R Ferris
Elba, R. Watkins
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Flat Rock, John Cooke
Farmington. Wm. E. Pier
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Grandville, Dan. Stewart
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Howell, F. C. Whipple
Hudson, Aug. Finney
Hastings, F. Corning
Hartwellsville, Isaac Gale
Ionia, B. Harter
Kalamazoo. Wm. H Edgar
Lyons, Adam L Roof
Lima, J White
Lexington, Geo Smith
Meialon, E Allis
Michigan, L S. Warner
Marion, L. E. Beach
Medina, B B. Secor
Manchester, S. N Palmer
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Plymouth, M. L. Shutts
Plainwell. C. C. White
Pontiac. H. N. Howard
Rawsonville, John Lake
Redford Jas. Harris
Romeo, C F. Mallany
Superior, John Brewer
South Nankin, N. Collins
Saline, Wm. Dell
Saugatuck. D. Platt
St Joseph, Alex. Leeds
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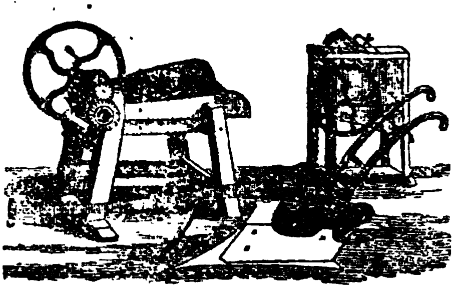

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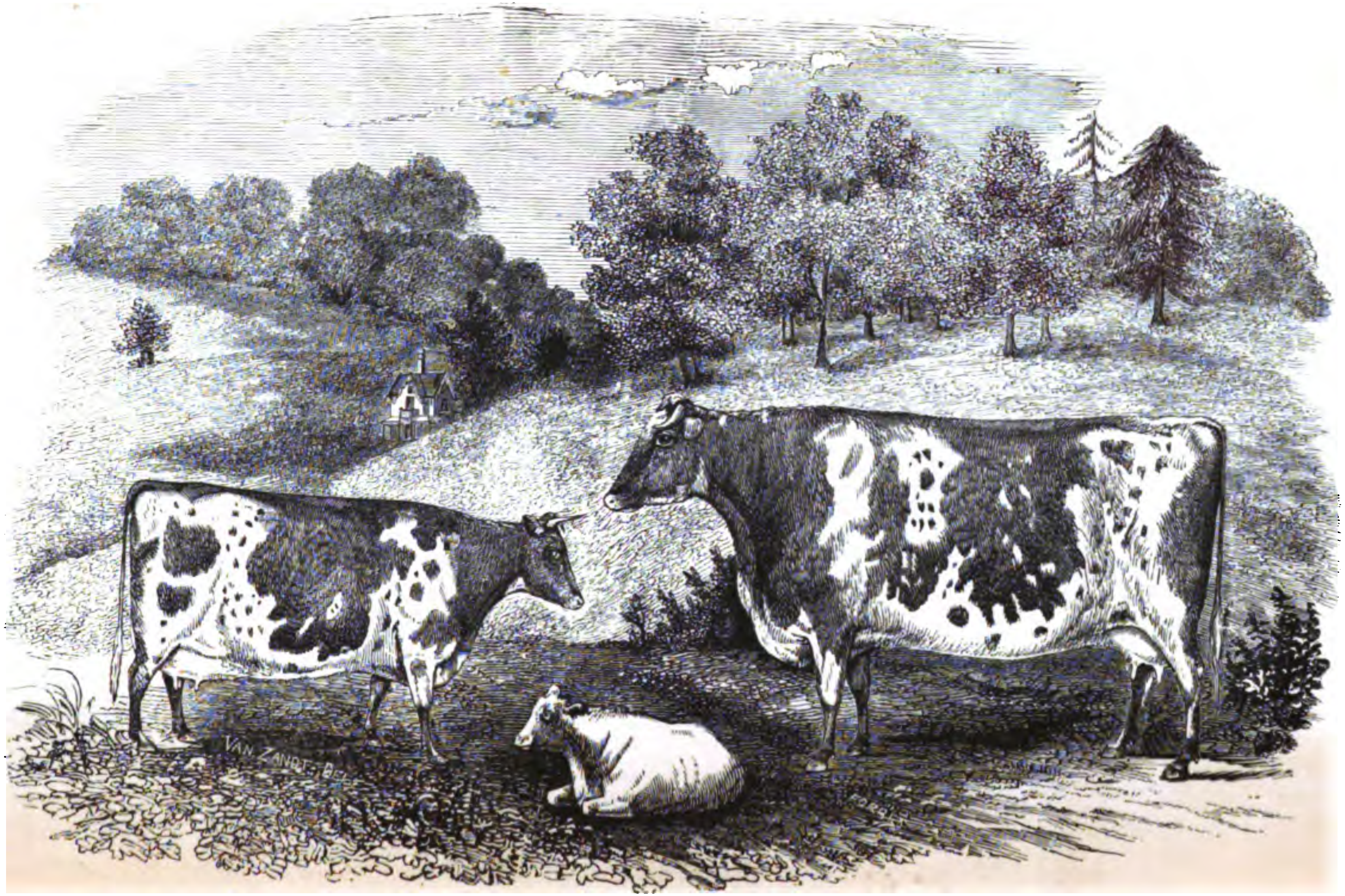

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, JANUARY, 1849. VOL. VI.—No. 1.

Sketches of Farms.

The Farm of the Hon. Daniel Webster.

EDITORS OF THE CULTIVATOR—In the month of October last, I spent a day upon Mr. WEBSTER's farm, at Marshfield, in Plymouth county, Mass., and although I was not so fortunate as to find him at home, my disappointment was much lessened by the polite attentions of MRS. WEBSTER; attentions which good sense and genuine hospitality ever suggest. Mrs. Webster evidently takes a lively interest in agricultural improvements,—as all *farmer's wives* should do,—and the general cardinal principles of good farming are, with her, familiar topics. I shall not be able, at this time, to speak of Mr. Webster's farming, with that particularity which I could wish; but promising myself the pleasure of accepting his polite invitation to repeat my visit in the spring, at a time when he may be at home, I shall hope to make further comments with more minuteness.

As a Statesman and Orator, Mr. WEBSTER is thoroughly known, at home and abroad; but it is not, perhaps, so generally known that he adds to the other branches of his extensive and varied knowledge, a thorough acquaintance with the practical principles of Farming. Indeed, upon this subject, he is as much at home as upon any matters of law or state in which he is so much distinguished; and nothing affords him more true pleasure than the personal supervision of the farming operations on his estate, and social and familiar discussion of the principles of good husbandry with his brethren of the plow. He retires from the noise and bustle of the world, and the wearing duties of public life, during a winter at Washington, to his pleasant and modest country seat, with much delight; and here —the affairs of State all laid aside, and his mind let down to the humbler, but more genial concerns of husbandry and domestic life—no man can be more easily approached. Here, he is ever ready to impart or to receive information upon practical matters of common life; and none can be more cheerful and familiar in all that pertains to agreeable companionship, than the yeoman,—the Farmer of Marshfield.

The farm of Mr. WEBSTER consists of some twelve to fifteen hundred acres, over two hundred of which are in an improved state of tillage, and the remainder is salt-marsh, pasture and wood-land. The estate is made up of several smaller farms, with the buildings still remaining, which are leased to the men in his employ, the whole being among the oldest settled lands in New England. The soil generally, in this region, is a thin sandy and gravelly loam, resting upon a loose and porous subsoil; and those portions that still remain in an unimproved state present, after the drouths of summer commence, a brown and most sombre appearance. Plymouth county, at best, has a stern and hard soil; and much of the land has not apparently, been improved by the long course of wearing tillage it has received. Mr. WEBSTER has directed the attention of his neighbors near the sea-board, to a more full appreciation of the rich fertilizing treasures which the ocean affords, for the melioration of their light, hungry lands, and no doubt improvement will be seen in consequence.

The mansion-house, a little elevated, is situated in the midst of an extended and richly diversified plain, with a somewhat broken surface. In a westerly direction, this plain rises gradually, terminating in a hill of considerable altitude, which commands a full and charming view of the whole estate. In the opposite and easterly direction, it lies open to the sea, affording from the house, a fine view of the ocean's broad expanse, from which it is distant about ½ mile. The house stands back some forty rods from the public road, and is approached by a broad avenue, lined with a flourishing and well-trimmed hedge, and a variety of forest and ornamental trees, mostly planted by the proprietor's own hand. It is of two and a-half stories, with a broad and tasteful piazza on two sides, the borders of which are ornamented with climbing and ornamental shrubs. The upright part of the mansion was built by a man of wealth some 70 or 80 years ago. To this Mr. WEBSTER has since added a spacious library-room in the rear. Here may be found the thoughts of gifted minds of past ages, as well as the choicest productions of the present time. There are several fine pictures in the room, among which were noticed full-length paintings of Mr. WEBSTER and Lord ASHBURTON. This Library, with its countless volumes, struck us as worthy of its owner;—a fitting place for the retirement of his noble mind, where it could commune with the choicest thoughts of other gifted men, or carry on its own peculiar work of great thinking. There has been no effort at display, either within or without the mansion; but the whole has an appearance of comfort and convenience, reminding the visitor, as some one else has well remarked, of Cicero's description of a house fit for the residence of a distinguished and respected character:—"It is neither small, mean, or sordid, nor enlarged with profane and wanton extravagance."

The barns and other out-buildings are well and durably constructed, and very conveniently arranged. The most unexceptionable neatness and good order prevail in every department at the barns.

Mr. Webster purchased this estate, and commenced his improvements, about fifteen years years ago; the land then being in low condition, and affording but scanty harvests, the result of a wearing husbandry, almost from the landing of the pilprims. He now cuts over two hundred tons of upland hay, besides a large quantity of salt-marsh. His pastures support about one hundred head of cattle, and some sheep. The brown and dry knolls have many of them been covered with a lively green, by an improved tillage.

Improvement of Pastures.—It appears to have been a favorite object with the proprietor, to improve his pasture lands; thereby increasing the amount as well as the quality of the feed. Much of this soil is naturally very light and thin, and the surface being quite broken into knolls, the land, in its unimproved state, evidently suffers severely from drouth. He has been constantly and steadily progressing in the improvement of the pastures, and now many of them afford fine ranges for the stock. These improvements have been made in a variety of ways. Buckwheat, and other green crops have been somewhat used, with good results; but the main dependence has been upon the rich fertilizing materials afforded by the sea. The kelp-weed, of which I shall presently speak, possesses wonderfully enriching power on these light soils. The fresh appearance of the knolls, which have been covered with a verdant herbage by the application of kelp, in contrast with those which still retain their brown and seared surface, is quite pleasing to the eye of the observer, as it no doubt is to the taste of the cattle. The menhaden fish have also been largely used on these lands, and some of them, which were dressed with this fish several years ago, still maintain a thick and superior herbage.

I noticed a pasture-field of several acres, embracing a high and dry knoll, with little or no feed of much value upon it, which was under a course of improvement. A very heavy coat of swamp-muck had been hauled on to the field, sometime previously, from a swamp close by, and heaped out for spreading. It had in this state been exposed to the action of the atmosphere sufficiently long to become very dry and crumbling. The muck was spread over the surface and plowed in, and the field sown to rye and grass-seeds, the rye to be fed off by the stock. I noticed that upon an adjoining field, which had been similarly managed, the grass was very good. In fact, there was more value of forage upon one acre than upon four acres of the first mentioned field. In the old and thickly settled portions of our country, the pastures have been much neglected and worn; the prices they command are comparatively high; the price of pasturage is also high; and hence improvements in this department of farming are as valuable and desirable as in almost any other.

Cultivation of Forests.—Mr. Webster takes much pains in promoting the growth, and increasing the number and variety of forest-trees. The forests that were growing at the ime of his purchase, have been carefully preserved, and a great number and variety of other American forest-trees have been planted by him, many of which are now quite thrifty and sizeable, affording abundant proof of the utility and eventual profit of a careful attention to this branch of good husbandry. The example Mr. Webster has given is most commendable, and any intelligent visitor at Marshfield, witnessing the thrifty growth of these young trees, cannot fail to be impressed with the fact that this matter has been too long and too generally neglected.

The Stock.—About thirty swine, of all ages, are kept here. They are of the Mackay breed, in all its purity; and are among the best specimens of this favorite breed to be found in New-England. Among others, I particularly noticed his old boar. He is thirteen years old, a fine stock getter, and has been carried into almost every county in the State. An old breeding-sow, with 12 snow-white pigs of very uniform size, also atttracted my attention. Mr. Webster is also raising a pair of Suffolk pigs, in order to test the qualities of that breed.

Mr. Webster has imported some fine cattle of the Ayrshire, Devonshire, and Alderney breeds, and is observing the comparative merits of each. His stock of Ayrshires, of all ages, is quite numerous, and probably they are not excelled by any equal number in the country. He esteems them highly as a dairy-stock for the New-England soil and climate, and his cows of this breed are excellent milkers. Mrs. Webster informed me, however, that the Alderney cow surpassed all others for the rich quality of her milk; that the cream can be churned into butter in a very few minutes, and being of too deep an orange color to look well on the table, the milk of this cow is usually mixed with that of three or four others, perceptibly coloring the whole. She does not give as much milk, however, as either of the Ayrshire cows.

He has a fine young bull of the Alderney breed, and has for experiment coupled him with some of the Ayrshire cows this year. He has an old Devonshire bull and many grade-cattle and steers of his get, which are esteemed highly for the yoke. A promising bull-calf of this breed was also noticed, and a Durham cow of remarkable capacity as a deep milker. The farmer of Marshfield is not to be beaten by any other farmer, in the number and fine majestic appearance of his working oxen, of which he keeps several yoke for the business of the farm. Twenty-five steers were noticed in one lot, which have recently come down from his old farm in New-Hampshire. Mr. Webster has any quantity, and a great variety of poultry and water fowl, ann ponds of water for them.

He takes great delight among his cattle; and the progress of each animal is carefully observed and well known by him. Before leaving the farm in the autumn to engage in the duties of public life, he usually has all the cattle brought up to the barns, and each animal put into its stall, which is numbered, and of which a memorandum is taken. His head farmer keeps him informed, during the winter, of the state and progress of the stock and other matters, and if any particular animal is mentioned, he knows all about him at once.

Manure.—In addition to the bountiful supply of manure made by the numerous stock, the sea also affords a large amount of valuable material for the improvement of the soil and crops. The sweepings of the marsh, so called,—which are composed of a variety of vegetation from the marsh and the sea, the most valuable of which is the rock-weed,—are brought in by the tide and deposited in winrows on the margins of the upland. They are gathered up, at different times, and deposited in the barn-yards and piggery. Swamp-muck and mud and turf from the ditches in the marshes, are also carted into the yards during summer, and the whole mixed up with the manure-droppings by the treading of the stock. The hay cut upon the marshes is profusely used for littering the yards and sheds during the foddering season. The barns are not conveniently located for cellars, and the planks of the stable-floors are therefore laid with an opening of three-fourths of an inch, and muck or loam thrown under the stables in the fall to the depth of two or three feet, in order that nothing shall be lost. Large quantities of the menhaden fish are taken in the seine, and either composted with muck and other material, or spread directly upon the land as a top-dressing for grass, or plowed in for hoed crops.

Use of Kelp.—But one of the most interesting matters pertaining to Mr. Webster's farming, is the systematic and extensive business of collecting and using kelp. Until he commenced farming, the value of this plant, as a fertilizer of the soil, was not at all appreciated in this region, although thousands of tons of it were annually thrown upon the shore, to be decomposed and again washed away into the ocean. He estiiates one load of it to be equal, in the power of pro-uction it imparts to the land, to three loads of ordinary irm-yard manure. It gives me pleasure to add, in iis place, an extract from a letter just received from . P. NORTON, Esq., professor of Agricultural Chemis-y in Yale College, in answer to some inquiries of iine as to the nature and constituent parts of this sea-eed, and it will readily be seen from his description, hy this substance is so valuable to the farmers on the a-coast:

"The name *kelp* does not, as I understand it, apply any particular kind or class of sea-weeds, but to the sh which is left when they are burned. This ash was rmerly made in great quantities, on the northern oast of Scotland, for the purpose of glass making, and ld often under the Spanish name of 'barilla.' Carbonate f soda is now so cheap that the kelp is chiefly applied the land, and for this purpose brings £3 (about $15,) er ton. It contains a large proportion of the alkalies, otash and soda, much sulphuric acid, and generally a ood proportion of phosphates; also, of course, com-on salt. It is therefore a very valuable manure. he organic part contains much nitrogen, besides a pecies of mucilage, and, in some varieties, a kind of ugar. In the Lothians of Scotland, a right of way to the sea-coast to gather sea-weed, increases the rental f a farm, to the extent of five or six dollars per acre."

The particular substance which Mr. WEBSTER calls elp, is a plant growing in shallow water and rooting pon the stones, the stalk being four to five feet long, rith a long and broad leaf. It is a very gummy plant, f a greenish appearance. A strong wind, blowing rom the eastward, drives great quantities of it on to he beach, depositing it in large winrows at high water iark. Immediately after one of these blows, all the orce of the farm, of men and teams, is set at work in auling it to the uplands. It is spread directly from he cart, and mostly plowed under the soil, for hoed rops, without any delay. But when taken at intervals iconvenient and unseasonable for turning under for his purpose, it is either spread as a top dressing on he mowings, or used in fertilizing the pastures. Its est effects are realised when plowed in for hoed crops.

It is necessary to secure the kelp very soon after it s deposited on the beach; for if left in a pile, a pow-rful fermentation commences, and the next high water arries it out beyond reach. There is no particular ule observed as to the quantity used, the ground being overed with as much as can be turned under, by the low. A short time previous to my visit at Marsh-ield, there had been one of these heavy easterly winds, nd the kelp thrown on shore had been carted to a field f several acres of sward-land, and plowed immediate-y under the sod. Several teams were engaged in auling it from the beach, and others in plowing it in; ll hands working with all their might, and Mr. VEBSTER as much engaged in the matter as any body. The field is intended for corn next season.

THE CROPS.—Mr. WEBSTER goes largely into the ultivation of the various root crops. His potatoes, of f the Pinkeye and Mercer varieties, are as fine as I ave seen for years. They are very smooth and fair, nd have grown to a large size, without any indica-ions of disease. In fact, I was informed that they are ot affected with the rot, when planted on his light, oamy soils, and manured with the kelp. It is an ad-nirable dressing for the potato; possessing great pow-r as a fertilizer, without any tendency to produce the atal disease which is of late years always sure to at-ack this root when heavily dressed with animal ma-iure.

A field of turneps, of ten or twelve acres, and adjoining it, five or six acres of mangel wurtzel and sugar beets, were noticed. Here again the advantage of the kelp, as a dressing for these succulent crops, was at once apparent, not only in the luxuriant growth imparted to them, but also in the entire absence of all weeds from the soil; for, unlike manures from farm-stock, the material taken from the sea, brings with it no weeds to the soil, and the labor of cultivation is therefore materially lessened.

The corn crop is good, averaging, I should judge, over 60 bushels per acre. The crop of hay is abundant, the season having been most favorable for grass, and over 200 tons of upland hay have been gathered into the barns. I noticed that a good deal of grass is cut here, called "black grass," which grows on the margins, between the uplands and salt marshes, and is highly esteemed as forage for the stock. I was informed that it does not flourish in any other locality. The marshes yield a heavy burden of hay, and some of it makes very fair winter fodder, but the most of it is profusely used in bedding the stock and littering the yards and sheds during the winter. The barns are full; and an abundance of the requisite materials is at hand, for carrying the numerous stock through the foddering season, in fine condition.

In closing this communication, it gives me pleasure to remark, that the importance and the improvements of agriculture have, from early college days, been a favorite subject with Mr. WEBSTER; and he has ever, both by precept and example, shown that he regards the cultivation of the soil as the highest and most ennobling employment of man.

Hear his own remarks in this connection:—

"Agriculture feeds us; to a great extent it clothes us; without it we could not have manufactures, and we should not have commerce. These all stand together, but they stand together like pillars in a cluster, the largest in the centre, and that largest is agriculture. Let us remember too, that we live in a country of small farms, and freehold tenements; in a country in which men cultivate with their own hands, their own fee simple acres; drawing not only their subsistence, but also their spirit of independence and manly freedom from the ground they plow. They are at once its owners, its cultivators and its defenders. And whatever else may be undervalued, or overlooked, let us never forget that the cultivation of the earth is the most important labor of man. Man may be civilized, in some degree, without great progress in manufactures, and with little commerce with his distant neighbors. But without the cultivation of the earth he is in all countries, a savage. Until he stops from the chase, and fixes himself in some place, and seeks a living from the earth, he is a roaming barbarian. When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization."

We often hear the clamor of 'book-farming,' 'gentlemen farmers,' &c., &c., raised against the men of wealth, or of gifted mind, who engage in farming, from a natural taste that way, and a desire to promote improvements. It usually proceeds from ignorance or a narrow mind. No man of sense or intelligence ever joins in this clamor; keeping his own operations within the limits of his means, he is readily convinced upon reflection, that to this same class of citizens, agriculture has been largely indebted, in all countries and in all ages. F. HOLBROOK.

Brattleboro,' Vt., Nov. 24, 1848.

ASHES ON GRASS.—S. R. Gray, of Salem, N. Y. sowed in the autumn of 1845, 25 bushels of unleached ashes on two acres of meadow, on a western hill-side, which had been mown for thirty years. The crop of hay was increased from half a ton per acre to a ton, and the second year to a ton and a quarter.

Suggestions for Farmers.

"To Improve the Soil and the Mind."

THIS was the motto adopted by the lamented BUEL to express the design of our work. Though the words are well chosen, perhaps the object might be more distinctly told by a transposition of them, inasmuch as a proper improvement of the mind of the farmer, seems naturally to constitute an important step towards the improvement of the soil.

By a proper improvement of the mind, we mean, in this case, the acquirement of such knowledge as will better enable the farmer to understand and prosecute the business of his profession—knowledge which shall bear the same relation to his vocation, as that which is possessed by the physician, the merchant, and the mechanic, bears to their pursuits.

The idea, we trust, is not now very extensively held, that little or no intelligence is necessary to direct, rightly, the operations of agriculture; though we fear the supposition is too frequently indulged, that the circumstances in which farmers are placed, are unfavorable to mental energy and the culture of the mind. It is admitted that *severe* bodily labor is prejudicial to the exercise of the mental faculties; but we are confident that the organs of both mind and body are developed and strengthened by a due degree of muscular exercise. Hence the circumstances best calculated to improve the condition of the farmer, are those which call into proper action the intellectual and physical powers with which he is naturally endowed.

But there are now, fortunately, many farmers in our country whose labors are not so constant as to interfere with the improvement of their minds; many, indeed, are *thinking* and *reading* men; and we are forced to conclude that it is more from lack of inclination than the existence of real obstacles, that the class is not more numerous. The long winter evenings and stormy days, afford many hours of leisure, during which a great amount of useful information might be gathered.

To show that manual labor is not incompatible with high mental capacities, it is not necessary to go back to ancient times—when

> ——— "the sacred plow employed
> The kings and awful fathers of mankind."

The names of distinguished individuals of our own country may be given as examples of the fact. PICKERING, BUEL, HARRISON and WRIGHT, were accustomed to the practical labors of the field; and if we look, now, into our halls of legislation, either for the different states, or the nation, we shall find, among the sensible, sound-minded, and influential members, a fair representation of *working* farmers.

We have spoken of that kind of knowledge which is to assist the farmer in his business, and the question naturally arises, how can this knowledge be most readily obtained? We answer, by observation, by conversation with, and by reading the writings of each other. But while we would urge the importance of inquiry, we would by no means advise a credulous assent to every story which may be heard or read. The mind of the farmer should be so enlightened that he may be capable of judging for himself, and by a careful discrimination, be able to select what is really useful and *applicable to his peculiar wants*. It is only by observation, by reading, study, comparison and reflection, that this important faculty of discrimination can be acquired.

In recommending to farmers the reading of agricultural books and periodicals, we would not be misunderstood as to what we consider the proper office of such works. They should be regarded as *aids* to experience and practice. "They furnish hints," says a sensible writer, "which intelligent men may turn to great advantage, by trying them first on a small scale, and altering them to suit their particular circumstances; they inform us of the progress of our art in various districts; they refresh the memory, brighten the intellect, and improve the mind; they are vast stores of *facts*, from which many useful lessons may be learned by the studious farmer."

But though we deem it the first duty of the farmer to make himself acquainted with the business of his profession, we would not restrict his mind to one class of subjects. The pleasures of the imagination, and even the cultivation of a refined taste, are not beyond the sphere of persons in rural life. The favorite bard of Caledonia, who was proud of the appellation of "Ayrshire Plowman," composed many of his best pieces while holding the plow—a favorite employment with him.

JAMES HOGG, the "Ettrick Shepherd," became widely known on account of his poetical effusions, while tending sheep on the Scottish mountains; and his prose writings, penned under similar circumstances, relating to the management of those animals, are among the most valuable we have on that subject.

GILBERT BURNS, a brother of the poet, distinguished as a man of sound sense and extensive information, in a letter to Dr. Currie, respecting the propriety of educating the middling and lower classes, combats with great force the idea that the exercise of the mind is inconsistent with the employment of the hands. He observes—"I can say from my own experience, that there is no sort of farm-labor inconsistent with the most refined and pleasurable state of the mind, that I am acquainted with, thrashing alone excepted." The primitive mode of performing that kind of work, he regarded as "insupportable drudgery;" and he suggested that the man who invented the thrashing machine, deserved a "statue among the benefactors of his country, to be placed in the niche next to the person who introduced the culture of potatoes."

The happiness which may be derived from a contemplation of the beauty and harmony of nature, as evinced in the laws which govern the mineral, vegetable, and animal kingdoms, constitutes one of the strongest incentives to investigation and the pursuit of knowledge; and in this respect, none have greater opportunities than the farmer, who—

> "To Nature's voice attends, from month to month
> And day to day, through the revolving year;
> Admiring, sees her in her every shape,
> Feels all her sweet emotions at his breast."

Order and System in Farming.

The improved condition of Agriculture in the state of New-York, is evident in nearly every county, it is made apparent in the products which flow in abundance to our seaport markets, and it is equally apparent on the whole face of the state. Science has industriously collected the fragments of agricultural knowledge, heretofore scattered over this and other countries, and having arranged them with system, we are enabled readily to retain and to employ them.

With advantages so great, it is surprising to notice the embarrassment and loss, which are permitted to harrass and distract a large number of our most industrious farmers, an embarrassment which neutralises their efforts, and holds back from them much of the profit their farms would naturally afford.

It is the absence of *Order* and *System* in their proceedings, to which allusion is made; a palpable want of arrangement of facts, of principles, and of objects, to form a complete whole.

At this season of the year, (November,) we are forcibly reminded of this truth; the neglected corn, still standing on the field—the rich soil intended for spring crops, resting under a covering of mischievous weeds; the new grown wheat plant suffering already in stagnant waters, for want of proper drains or furrows; the plow and the harrow, resting on a soft and muddy headland, there to remain exposed to the winter storms; the fine wooled sheep hurrying over a long fed pasture, snatching a scanty meal, while an adjoining field exhibits a bountiful supply; abundant hay stacks far from the barns and sheds, around which the sheep cluster in snowy weather, exposed and shivering; such, and such like negligences are, every where too often to be seen, in this our beautiful state—negligences arising from a want of *system* and *order*, and for which an easy remedy exists, when the suffering party can be convinced, that he not only loses a portion of the moneyed benefit he seeks for, but also loses in the estimation of his fellow-citizens, who view with silent regret the slovenly aspect of his farm, the want of *order*, and the loss of natural advantages for want of *system*.

It was Burke who said, that "good order is the foundation of all good things;" and as farmers we may be assured, that a want of *order* in our farming operations, and a want of *system* in our course of cultivation, must and will display a confused mind,—a mind without a steady object, relying on chance, dependent on accident, causing a loss of many "good things."

The season is now at hand when all our out-door operations cease; in fact, the systematic farmer *has* closed his field labor for this year, except perhaps ditching, or the removal of stumps and stones. Now is the season to reflect, and establish a *system* for the coming year, and by a judicious arrangement of crops and field work, have or cause each to follow in an order, admitting of no hurry or anxiety for its due and thorough accomplishment; this, generally may and can be done, and the man who omits it cannot run an equal race with his better informed and careful neighber.

No excuse or apology can be found for the want of order; it does not require talent or skill, neither does it consume time; while its exercise causes every thing within its influence to be ready for action, agreeable to the eye, enduring in existence, and fitted to produce the required results without failure.

Neither can any man be excused for a want of system, no, no more than ignorance can be tolerated in this state, where such abundant sources of knowledge are freely proffered. 'Tis true, that *system* requires effort of mind, and so does every vocation whereto man is called, if he would perform his whole duty. None on this earth have more need for the exercise of mind than we who cultivate the soil; every department of science is embraced in a proper fulfilment of our duties, and so wide-spread and essential are the claims upon our minds, that without system no man should enter upon a farmer's life; without system he cannot succeed; he may draw out a toilsome existence, but he cannot accumulate wealth and be truly prosperous, independent and happy, unless SYSTEM guides every project, and ORDER presides over every department of his farm. AGRICOLA. *Seneca Co., N. Y., Nov.*, 1848.

Agriculture and the Agriculturist.

I remember to have seen it asserted something to this effect, by the late John Quincy Adams, that "if there was one business, profession, or calling, that was more independent than another—one that could be strictly called more noble—it was agriculture." And this was doubtless true. Agriculture is the great centre around which all the other occupations of society revolve. Trade, commerce, manufactures—even the learned professions, owe their welfare to agriculture. Look at it from any point of view we may, the farmer, simple homespun name as that has become, wields a tremendous influence over society. Little does that man who is quietly cultivating his potato patch, or hoeing his corn-field, think of the importance of his calling. He is a part of a great whole that, to do without, would be to bring dearth and famine upon the land. Such is agriculture; and yet we often hear men complaining of it as a dull, monotonous occupation—that it is destitute of the excitement and profits of trade—that farms, as a general thing, do not pay more than four per cent. interest—that it is a life of almost unremitted physical exertion. To examine partially into these objections urged against agriculture, is the object of the present article. That some, or all of them, may, at first sight, appear true, is very possible; but I am very well convinced that a few moments' reflection will set matters in their true light.

Is farming a dull, monotonous occupation? I answer, no. To him whose only ambition is to become a good plowman, or to learn to do any of the merely mechanical parts of agriculture, in order to gain his daily bread—to him who has never said to himself, "I wish to improve my mind as well as my soil," agriculture may indeed be dull. But to that man who has entered upon it with nobler and loftier views—who, finding himself in the great laboratory of nature, sets himself at work with hand and mind to explore the hidden depths of earth—to him who unites scientific research to practical experience—who with a master mind turns everything upon his farm to good account—to him who is not weary in well-doing, but through difficulties and trials presses onward—to such a man, I say, agriculture offers a noble field for the exercise of mind. While he holds the plow with his hands, his head is at work; he thinks—he plans—the hours fly swiftly away, for his mind is working as well as his body.

Is agriculture destitute of the excitement and profits of trade? Many will answer yes—but for my own part, I can find excitement enough in agriculture for my taste. In the changing seasons—in the calms and the storms—in the drouth and the deluge—in the influence of weather on crops—there is enough for the exercise of hope and fear. As to profit, when we consider that it has been pretty clearly ascertained that out of every hundred persons engaged in business, more than eighty fail during a period of fifteen or twenty years, I feel warranted in saying that in the end, considering the amount of capital invested, the profits of agriculture are at least equal to those of mercantile pursuits.

Do farms generally only pay four per cent. interest? If so, how is it that so many men buy a farm, pay down one-third or one-half—leave the remainder on bond and mortgage, at six or seven per cent.,—pay their interest—support a family, consisting of a wife and three or four children—keep their farms and buildings in good repair, and eventually pay off the whole amount due. This is not an uncommon case. Many have a very loose way of calculating what a farm produces. They *live* from their farms, taking no account of what they get from it for family use, and only considering what they sell as what their farms have produced.

Let a man with a small family have four thousand dollars invested in a farm; could he not live better upon that sum thus invested, than he could with the same amount invested at seven per cent. interest? No one can hesitate in an answer to this question.

As to the hard work of agriculture—I glory in it. In these days, when men are turning and twisting and using every subterfuge to escape from labor, and live by their wits, I welcome that calling that brings man to acknowledge the great law of God and of nature—that of labor. Excessive labor, whether physical or mental, is injurious; but rational labor is a blessing, and not a curse. That some men do not labor enough, and that others labor too much, is the fault of a corrupt state of society, not of their calling or occupation.

There is one thing against which I would caution my fellow farmers, and especially, my fellow *practical* farmers, and that is, never to suffer their minds to run wild while they are bestowing such care on their farms. Depend upon it, science and agriculture must go hand in hand. Science will aid you much, and save you from much of that unremitting physical exertion of which you sometimes complain. Free yourselves from those prejudices against book-farming which many of you have read, and ponder well what you read, and it will not be long before your calling, which has been too much neglected from your own indifference, will rise to its true height. H. C. W. *Putnam Valley*, *N. Y.*, *Nov.* 30, 1848.

The Veterinary Department.

Ticks on Sheep.

TICKS are a great annoyance to sheep. The itching they produce causes the sheep to rub themselves against fences and other objects, and to scratch and bite themselves with their teeth, in doing which they pull out their wool, and mat and injure that which is left on the body. The best course to prevent the increase of ticks, is to wash the lambs in a decoction of tobacco, three or four days after the sheep have been shorn. The ticks, being deprived of protection on the sheep, resort to the lambs, where they find suficient covering in the young wool.

But if, from the want of proper precautions, the flock is found affected with these vermin in winter, or while the wool is long, the best mode of destroying them is by fumigation. Take a canister, of copper or sheet-iron, made at one end to fit the pipe of a bellows, and having at the other end a small pipe for the escape of the smoke. Fill the cannister with tobacco, put in a coal of fire, and fasten the canister to the bellows-pipe, around which there should be some damp tow to make it fit tight. The wool should be opened in lines or furrows around the body, from six to eight inches apart. As the wool is opened the pipe or canister should be applied close to the skin, the wool immediately closed around, and slightly compressed at the surface with the hands, and at the same time a puff given with the bellows. This will keep the smoke close to the body. The work may be done very expeditiously, and with due attention, nearly every tick will be killed.

Hoof-ail in Cattle.

This disease, sometimes called "foul in the foot," is most common in open winters, or when cattle are obliged to travel or stand much in mud. It is known by lameness, soreness between the claws of the foot, with inflammation, and in advanced stages, discharge of fetid matter, which issues from between the hoof and the foot. A separation of the hoof after a while takes place, and if the disease is not checked the hoof sometimes comes off. Though the disease, like foot-rot in sheep, is believed sometimes to originate sponstaneously, there is good reason to believe that it is contageous; and on this account, an animal, as soon as it is affected, should be kept by itself. The best remedy, if used when the disease first manifests itself, is blue vitriol, or sulphate of copper. First wash the foot in strong soap-suds, and then apply the solution of vitriol to the affected part, twice a day. If the disease is of long standing, the hoof should be pared away from the upper edge, the offensive matter taken out as thoroughly as possible, and an ointment of corrosive sublimate and lard applied. The animal should be kept from wet, and if the foot is much sore, it should be protected by a bandage of strong cloth.

Diseases of Swine.

ITCH OR MANGE.—Swine often suffer greatly from this disease. In its worst stages, the skin becomes almost an entire sore, and the animal is distressingly irritated by the inveterate itching. It constantly rubs itself, becomes poor, and if not relieved, dies. An ointment of lard and sulphur, if thoroughly applied all over the body, and rubbed in, will generally cure the complaint. It is well to give sulphur with the food also.

QUINCY OR SORE-THROAT.—Cole, in the "Veterinarian," directs to give for this disease,—"Half a pint of molasses, a table-spoonful of each of hog's lard and sulphur, and a tea-spoonful of cayenne or black pepper. Melt, and mix all together, and when just cool enough, pour down the throat, unless you can make him eat it in light food."

Diseases of the Horse.

BROKEN WIND is a disease with which horses are affected. The air-cells of the lungs become ruptured, from various causes, and respiration is labored and irregular. "The cure of a broken-winded horse," says Youatt, "no one ever witnessed, yet much may be done by way of palliation. The food of the animal should consist of much nutriment condensed into a small compass; the quantity of oats should be increased and that of hay diminished; the bowels should be gently relaxed by the frequent use of mashes; the water should be given sparingly through the day, although at night the thirst of the animal should be fully satisfied; and exercise should never be taken when the stomach is full. It will scarcely be believed how much relief these simple measures will afford the broken-winded horse, and of how much exertion he may be gradually rendered capable. Carrots are very useful to the broken-winded horse, not only as containing much nutriment and considerable moisture, so that less water may be required, but from some property they possess rendering them useful in every chest affection. A broken-winded horse turned out to grass, will never improve, on account of the almost constant distention of the stomach."

NEUROTOMY.—S. A. Barker, of McConnellsville, Ohio, says that "the operation of Neurotomy, as described in Skinner's Youatt, has in every instance, in this part of the country, proved fatal. Thousands of dollars worth of horses, operated on, have been lost." (The operation consists in cutting certain nerves from the foot of lame horses, and though producing at the time apparent relief, results ultimately in the destruction of the foot.) S. A. B. states, "in June, the hoofs of some of the horses operated on, literally rotted off, while the animal, insensible to pain, continued to stamp the lacerated and denuded stumps on the ground, to drive away the flies, which bit it above the point operated on."

STRAINED SHOULDERS IN HORSES.—The following is a good embrocation for strains: Spirits of turpentine, half a pint; oil of origanum, half an ounce; olive oil, a pint and a half; cantharides, one ounce. Mix together; keep it in a bottle; shake it often; apply it to the affected part, and rub it in, morning and night.

Different Species of the Ox.

Aurochs, or European Bison.

Of animals belonging to the genus *bos*, or ox, several distinct species exist; other species have passed away and are only known from history or their remains, which are found in various parts of the world. Of the latter class may be mentioned the *urus*, a huge animal which once inhabited the wilds of Europe, and was described as little less in size than the elephant, with immense horns, and of untamable ferocity. This race has been extinct for many centuries. But another species which existed contemporaneously with the urus, called the *bison* or *bonassus*, is believed to be identical with the Lithuanian wild ox, *aurochs* or *zubr*, represented by figure 1. A similar species, or perhaps the same, exists in the Caucasian mountains.

The idea that the ancient urus was the parent of our domestic ox, is now rejected by all naturalists; as is, also the equally untenable theory that the domestic stock is descended from the bison or aurochs. They have wide anatomical differences. The common ox has 13 pair of ribs, the aurochs 14 pair; the lumbar vertebræ of the common ox are 6 in number, those of the aurochs are 5; the front of the common ox is flattened, that of the aurochs is protuberant, and broader in the proportion of three to one; the occipital space between the horns forms an arch, instead of being flat.

1.—AUROCHS, OR EUROPEAN BISON.

The following description of the aurochs is taken from a Treatise on the Ox, by W. C. L. Martin:—

"The European bison, once so widely spread, is now confined to the forests of Bialowicza (pronounced Bealawezha) in Lithuania, where it is protected by stringent laws: whoever kills one, without permission of the Russian government, has to pay a fine of 2,000 rubles; or, if unable to meet the penalty, must suffer transportation to Siberia. Formerly the penalty was death.

"This species is wonderfully massive and robust in in its proportions; its withers are thick, and elevated, and covered, as are the neck, sides of the head, and lower jaw, and throat, with long, rough hair, forming a sort of mane beneath the throat, like a beard. This mane is often a foot in length, and is thickest during the winter, especially in old bulls; the hair covering the trunk and limbs is soft and woolly; the tail, which is short, is furnished with a tuft of stiff hairs at its extremity; the eyes are small, but their expression is extremely wild and savage, and when the animal is irritated they glare with fury; the tongue, lips, and palate, are blue. An odour, described as between musk and violets, is exhaled from the skin, and especially that portion which covers the convexity of the forehead. This odour is much stronger in the male than the female, and may be perceived at a considerable distance from the herd. The horns are large, round, and lateral, with the points sweeping upwards and forwards; the head is large and heavy, and carried low. The male aurochs is upwards of six feet in height at the shoulders, and is a most formidable animal; so great is its strength that, according to Dr. Weissenborn, trees of five or six inches in diameter are levelled by the thrusts of a bull. He fears neither the wolf nor the bear, but assails them with horns and hoofs; an old bull is a match for four wolves; and although a pack of wolves may sometimes hunt down a strayed aurochs, the collected herd has nothing to fear from any animal."

It is said that all attempts to obtain a mixed breed between the aurochs and domestic cattle have utterly failed. A great antipathy exists between them; the aurochs shuns the domestic race, and if contact is unavoidable, attacks them with fury and gores them to death.

American Bison, or Buffalo,

Closely allied to the aurochs or zubr, but evidently of a distinct species, is the American bison, *bos Americanus*, (fig. 2.) This animal formerly existed as far to the eastward as New-York and Pennsylvania; but at the present time, it is not found east of the Mississippi river, and its common haunts are to the westward to the base of the rocky mountains. Here they are sometimes seen in herds of twenty thousand. The race is, however rapidly decreasing in numbers, from the indiscriminate slaughter which has for a long time been carried on against them by the hunters, who kill them in vast numbers chiefly for their hides, which form the well-known "buffalo robes" of commerce.

Anatomically considered, the American bison differs more from the common ox than does the European aurochs. The ribs consist of fourteen pair, and the lumbar vertebræ are only four in number. Still, there have been repeated instances of its breeding with the domestic race; but the offspring, so far as we can learn, are invariably barren. Owing to the great breadth of forehead and the hump on the shoulders, the common cow, when impregnated by the bison bull, experiences great difficulty in parturition; but the bison cow readily conceives by the common bull, and brings forth without difficulty. We are not aware that the hybrid stock possesses any superiority over the domestic race.

2.—AMERICAN BISON, OR BUFFALO.

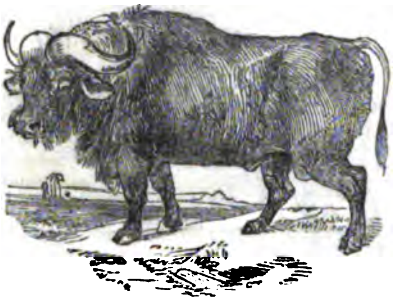
The Musk Ox.

Another species of ox indigenious to North America, is the Musk ox, *ovibos moschatus*. Its habitation is from the 61st to the 75th degree of latitude. It inhabits wild and bleak situations, feeding in winter chiefly on lichens, and in summer on grass. It is not larger in size than the smallest of our domestic breeds. Its flesh, though eaten by hunters and by the Esquimaux, is strongly imbued with musk. It is covered with long wooly hair, which reaches from its sides almost to the ground. The general color is a dark grizzled brown.

African Buffalo.

Mr. **Martin**, in the work above referred to, gives the following account of the African or Cape buffalo—*bos caffer*, (fig. 4.) "It is a native of the wilds of Southern Africa, where, associated in herds, it frequents the borders of woods and thickets, and the watered ravines and glens among the hilly grounds. This savage beast is fond of wallowing in pools and swamps, and in the muddy ooze, covering its almost naked but dense hide, with defensive clothing against the attacks of insects. The horns of this species form at their base a solid rugged mass, covering the forehead, from which they bend downwards, and somewhat outwards, gradually diminishing to the points, which suddenly curve upward. The distance between the points of the horns is frequently five feet, but the rugose massive base of each is in contact, forming an impenetrable helmet: their color is black. With these formidable weapons the Cape buffalo has been known to transfix a horse instantaneously, lift him up, and hurl him with crushing violence to the ground. The eye of this animal is savage and lowering, and betokens great ferocity; the ears are large and generally observed to be torn, either from combats among the animals themselves, or from the laceration of spines and thorns, as they force their way through the dense thickets.

3—MUSK OX.



4—AFRICAN BUFFALO

"The Cape buffalo does not exceed the ordinary ox in height, but is much more massively and heavily built, and is a far more ponderous animal, with short thick limbs, and a dense hide nearly destitute of hair; on the lips and throat, however, the hairs are long, rather thickly set, and very coarse.

"Among the natural enemies of the larger quadrupeds, the lion is the only adversary which this beast has to fear; but even the monarch of the desert does not always prove victorious, and instances have occurred in which several buffaloes have united in the rescue of an attacked companion, and gored the foe to death."

In future numbers we shall give further descriptions and illustrations of the different species of the ox tribe, and shall notice various domestic stocks and breeds.

Notices of New Publications.

Transactions of the American Institute, for 1847.—We have received the volume above mentioned, which numbers over eight hundred pages. The matter was chiefly prepared under the supervision of the late secretary of the Institute, T. B. **Wakeman**, Esq. In addition to the usual doings of the Association, the book contains several communications of value from persons in different parts of the country.

Mr. Colman's European Agriculture.—Parts nine and ten, which bring this work to a close, have been received. They comprise views of French, Belgian, Dutch, Flemish, and Swiss agriculture; with notices of various agricultural schools, experimental farms, and copious remarks on agricultural education. Most of the subjects are necessarily treated with brevity, owing to the small space in which they are condensed, but a great amount of information, of a practical nature, is given, in a style particularly interesting and attractive. We shall notice the work more fully next month.

Scientific Agriculture, or the Elements of Chemistry, Geology, Botany and Meteorolgy, applied to Practical Agriculture. By M. M. **Rodgers**, M. D. E. Darrow, Rochester, publisher.—This is a book of respectable appearance, embracing 275 pages. It is evidently designed to furnish the rudiments or first principles of the sciences mentioned in the title. It embodies a large amount of useful information on the various subjects brought under consideration. The arrangement appears simple, and though each subject is, necessarily, treated with brevity, the language is generally plain and within the comprehension of common minds. But as the use of technical terms cannot be entirely avoided in a treatise of this kind, a glossary is appended, which affords a ready explanation of any words not likely to be familiar to the general reader. We have not examined the work sufficiently to pronounce in regard to all its details, but are favorably impressed with its general character.

Holden's Dollar Magazine.—See advertisement of this magazine, page 39 of this number. We have never seen the work, but it is highly commended by the press generally.

British and Foreign Medico-Chirurgical Review, or Quarterly Journal of Practical Medicine and Surgery.—This ably conducted periodical ought to be in the hands of every member of the faculty in the country. It contains, also, much that is interesting and valuable to persons not immediately connected with medicine or surgery. With no pretensions to knowledge in the healing art, we can say we have derived great benefit from a perusal of this work, and we should be very unwilling to be debarred from it. It is issued quarterly in London, and re-published in New-York by **Richard & George S. Wood**, 261 Pearl-street. Price, $3 per annum. A quarterly retrospect of American practical medicine and surgery, compiled from all the American journals, is issued as a supplement to the *Review*, and is sent *gratuitously* to all subscribers who pay promptly in advance.

American Plows.—A writer in the (English) *Mark Lane Express*, who had made a thorough trial, side by side, of both English and American, says: "In justice to the American plows, I must say that they cut and turned their furrow quite as well as the others, at the same time breaking the land to pieces, and making a capital preparation for either drilling or dibbling; indeed, they are the most simple, light, strong, and efficient plows, that it is possible to conceive."

The Indian Corn Plant—Zea maize.

Varieties of Indian Corn.

Maize or Indian Corn, is undoubtedly an American plant, though we have no positive knowledge in regard to its original habitat. We are not aware that it has ever been found growing in a wild state; but as its spontaneous production could only take place in a region not subject to frost, it has been reasonably conjectured that it is a native of the tropics. What changes the plant has undergone by cultivation, it is impossible to determine. It was found nearly in its present condition, in the possession of many of the Indian tribes, at the earliest period of their acquaintance with Europeans, and according to their traditions had been cultivated by them for ages.

As its range of cultivation embraced the torrid and temperate zones, the character and habits of the plant presented considerable variety, as is seen at the present day. Each section had the kinds which seemed adapted to the soil and climate. The varieties of the south required more time to mature, had a large, tall stalk, with ears of proportionate size, the grains large, but flat, indented on the top, and in many instances of light weight in proportion to the bulk; those of the north matured in less time, had a short and small stalk, small ear, the grains small, round, flinty and heavy. Intermediate sections had kinds of medium character.

An enumeration of the varieties now cultivated is impracticable—they are very numerous; some were derived from the Indians, and, as we can trace them no farther, may be called original; many have been formed artificially, by mixture, and by selection, and in these ways they are constantly increasing. Dr. P. A. Brown, of Chester county, Pa., in an essay written in 1837, states that he had collected forty-two varieties. Taking those named by him, it would be easy to swell the list, by the addition of others already known, to sixty or more.

Of kinds believed to have been obtained from the Indians, we may mention the Sweet corn, the King-Philip corn, the Golden Sioux, and Tuscarora.

The sweet corn was known by the Indians as a distinct sort, and is remarkable for the peculiar shriveled appearance of its grains, their softness and sweetness. But few attempts, probably, have been made to change this kind, and it presents, comparatively, but little variation in its characters. It readily mixes with other kinds, when they are planted contiguously and are in blossom at the same time.

The King Philip corn is a rather small, yellow eight-rowed variety, which has been cultivated in the eastern part of Massachusetts, and in Rhode Island.

The Golden Sioux, or Early Golden Sioux, is a medium-sized, yellow kind, with from twelve to eighteen rows, obtained from the Sioux tribe of Indians. The celebrated *Dutton* corn, which was so highly recommended a few years since, is believed to be only a modification of the Golden Sioux. They are the same in all essential characters.

The history of the Dutton is as follows. In The Cultivator for April, 1838, Judge Buel states that this kind of corn was obtained about sixteen years previous, "from the Green Mountains of Vermont." A communication from Dan. Chipman, of Ripton, Vt., in the Cultivator for June, of the year before mentioned, states, "Not far from thirty years since, Salmon Dutton, Esq., a respectable farmer of Cavendish, in this state, procured a new variety of corn. Having raised a crop of it, and finding that it had a very large growth, and that it was, at the same time, earlier than the corn then generally raised in this state, and believing that the farming interest would be greatly promoted by raising it, in October, of the same year, he transported a quantity of it in the ear, to the place where our Legislature was in session, and distributed it among the members and others. It was thus distributed through the state, and took the name of the Dutton corn. I took an ear of it and planted it the next season; the stalks grew seven or eight feet high, and were large in proportion to their height. The ears were longer and much larger than any I had before seen, having from twelve to eighteen rows on an ear. The cob was very large and the grains very small, and not so flat as those of other corn; and many of the ears instead of coming to the point at the top end, were flattened and perfectly covered with very small grains. I raised the corn for several years, and found it somewhat earlier than the corn then common in this part of the country. I never ascertained which yielded the most corn by the acre, but considered there was very little difference. The Dutton produced at least a third more corn fodder than the other; and yet, after having raised it five or six years, I threw it by, finding it very difficult to prevent its moulding on the cob, by reason of its great size."

Mr. Chipman states that a kind of corn called the Rocky Mountain corn, was brought into his neighborhood, several years after that above described had been introduced. He says it perfectly resembled the Dutton in every thing but its size, which was smaller and the growth more dwarfish.

The Tuscarora corn is an early, dwarfish variety. The ears are short, with eight rows, the grains of a dull white color, rather large, and of a soft and starch-like consistence, hence remaining longer in a state fit for boiling than more flinty kinds. We have seen a kind called Tuscarora, but which we did not regard as *true*, that was larger and later than this.

The other most distinct varieties in this vicinity are the following: Early white flint, or Canada white flint; an eight-rowed kind, rather small stalk and ear, very early, and perhaps more prolific than any other kind of equal earliness.

Long-eared white flint; ears eight-rowed, sometimes twelve to fourteen inches in length; the cob small; grains round and flinty; of medium earliness; adapted to good lands, and on such, very productive.

Long-eared yellow; resembling the above in all respects but color. This kind is cultivated in the Connecticut valley; we have seen fine samples of it at agricultural exhibitions at Hartford and Springfield.

A yellow, twelve-rowed kind, sometimes called twelve-rowed Canada. Introduced here from the farm of S. W. Jewett, of Vermont. It is an early and excellent kind.

Characters of Varieties for the North.—The characters of a good variety of Indian corn for the northern states, are—1. A habit of quick growth. In this section, the seasons, at best, are but just long enough to mature this plant; hence the first point is the ripening of the crop, for if it fails in this particular, the labor of cultivation is lost.

2. A stalk of medium size and strong growth. Some kinds are naturally weak—are more liable than others to be injured by winds or by the attacks of insects, and require more attention to prevent their being overpowered by weeds.

3. A long ear, of uniform size from one end to the other, the cob comparatively small, the grains plump, deep, and so closely set as to entirely cover the cob, even to the top, without any vacancy. Some kinds have very large but-ends, and large, hard knobs at the butt of the ear. It is a great defect, causing the retention of moisture, and rendering the corn liable to injury by moulding in the crib, or while standing in the shock, and also by being frozen while wet, which destroys its germinating power.

4. Ears set on the stalk at a moderate height, and on short stems or branches. A variety that ears high, is likely to be proportionately more productive of stalk than grain. Some kinds ear so low that the grain is liable to be damaged by coming in contact with the ground—as the ears hang down, more or less, when nearly ripe. If the stems are short, the ears are less likely to be injured in this way. If the ears set too low, it is more difficult to cure the corn in shock, both on account of its being affected by the dampness of the ground, and by packing so closely as to keep out the air.

5. A thin husk. There is much difference in varieties in this respect. Those which have a light thin husk, ripen much faster, and can be husked much more rapidly, than those which have a thick covering.

An observance of these principles may lead to the adoption of the best varieties. It must be remembered, however, that to perfect a variety, and continue it without degeneracy, the strictest care is required from year to year. The seed corn should be selected *in the field*, as soon as it is sufficiently hard, and regard should be had to *every point* which it is desired the variety should possess.

PARCHING OR "POP" CORN.—In the neighborhoods of cities, the selling of parched corn is carried on to a considerable extent. The best kinds for this purpose are the Rice corn, and and a variety sometimes (though improperly) called Egyptian corn.

The Rice corn is a dwarfish variety, bearing from three to four ears on a stalk; the ears seldom over four inches in length, with from eight to twelve rows; the grains of a similar color and shape to rice; very flinty; and when cooked, either by being boiled while unripe, or parched after having become hard, of a rich and excellent taste. Of medium earliness, or rather late. Origin unknown.

The so-called Egyptian variety is larger than the above; stalks six to eight feet high; two to four ears on a stalk; ears five to seven inches long, generally with eight rows; the grains small, of roundish form, and of a dark blue or black color. Of medium earliness. We know nothing in regard to its origin, and can give no reason for its being called Egyptian. It is evident that this variety has no special affinity with a kind of *millet* which has been cultivated in this country, under the name of Egyptian corn.

Neither of the last-named kinds are very productive; but it may be an object to cultivate them in particular districts, on account of the high price they command from the dealers in parched corn.

The Poultry Yard.

Origin of the Domestic Fowl.

IT is impossible to trace remotely, the history of the common fowl. It was kept in a state of domestication by the ancient Greeks and Romans; but as is observed by MARTIN, in his late Treatise on Poultry, in *Knights Farmer's Library*,—"The circumstances attending their primeval subjugation are utterly buried in oblivion. The same obscurity that hangs over the early history of our domestic quadrupeds, hangs over that of our domestic birds, nor can we hope ever to dissipate it."

The only part of the world in which the fowl is still found in a wild state, is Southern India and the islands of that region. Nor have we any account of its ever having been met with elsewhere, in a state of nature. Hence it is reasonably concluded that the bird is of Indian origin. The author above mentioned informs us that at least four wild species are found in India, Malaya, Sumatra and Java; viz., 1. The Great Malay, Cochin-Chinese, or Kulm Fowl—(*Gallus giganteus*, of Temminck;) 2. The Javanese Jungle-Fowl—(*Gallus bankiva*, Temm.;) 3. Sonnerat's Jungle-Fowl—(*Coq sauvage*, of Sonnerat, *Gallus soneratti*, Temm.;) 4. Stanley's Jungle-Fowl—(*Gallus stanleyii*, of Gray.)

The first of these is undoubtedly the parent of our domestic stock, known under the names of Malay, Java, Cochin-Chinese, &c.

The Javanese, or Bankiva Jungle Fowl, fig. 12, is thus described by MARTIN:—

"This beautiful bird is found wild in Java, and is about equal in size to an ordinary Bantam—the black-breasted red varieties of which, with a dark steel-blue band across the wings, it closely resembles. The space round the eyes and the throat are bare, the comb is much developed and deeply serrated along the upper ridge, the wattles are rather large. Long, clear, brilliant, golden orange hackles cover the neck and rump. The upper part of the back, over which the hackles of the neck are continued, is bluish black. The middle and lesser wing coverts are of a rich deep chestnut, with the webs of the feathers disunited; greater coverts, steel-blue; secondaries also steel-blue, with a border of chestnut. The quills are brownish-black, edged with pale reddish-yellow. Tail black, glossed with changeable green and blue. Breast and under parts black. Contour very graceful, and every action animated and lively.

12—JAVANESE JUNGLE FOWL.

"It would appear that an allied but distinct species exists on the continent of India, distinguished chiefly by its larger size. Of this continental species, Sir W. Jardine states that he has seen three or four specimens. all of which came from India proper. From this perhaps, may be deduced the black-breasted red variety of our spirited game fowls.

"With regard to the Bankiva jungle-fowl, it cannot be doubted that it is the main source, if not the only one, of our Bantam breeds. The very term *Bantam* is sufficient to establish the fact. Bantam is the name of a town and district in the north-west of Java, belonging at present to the Dutch. The town is now fallen into decay, but was formerly a place of great importance, and still boasts of a governor, whose residence is at Sirang, or Ceram, a thriving town some miles inland. The Portuguese, who visited Java in 1511, carried on a great trade from Bantam with Hindustan and China, chiefly in pepper. In 1595 the Dutch established themselves at Bantam, and in 1602 the English erected a factory in the same place, which was the first possession of the English in the East Indies. Of the subsequent predominance of the power of the Dutch, who built the town of Batavia, not far distant from Bantam, this is not the place to speak. From this statement, however, it is evident that the beautiful Bankiva jungle-fowls, reclaimed by the natives, and sold to the British at Bantam, while their factory was established there, were imported into England under the very natural appellation of Bantam fowls. Their elegance and diminutive size rendered them favorites, and in due time the name, belonging exclusively to these birds, came to be conferred on all small or dwarf fowls indiscriminately, whether of this pure breed or otherwise. The domestic Bantam stock, as every one knows, breeds freely with ordinary fowls, the mixed offspring being intermediate in size between their parents; and that the Bankiva jungle-fowl will breed with our domestic Bantam race, and with other races, the offspring being fertile, we ourselves can testify. Such birds are common in the gardens of the Zoological Society, and so closely do the offspring of the Bankiva jungle-cock and a brown domestic Bantam hen resemble the wild or original breed, that on more than one occasion we have been in doubt; nor is this to be wondered at—on both sides was the lineage the same."

The male of Sonnerat's Jungle Fowl is described as follows:—

"Size intermediate between that of a Bantam and a game cock; but the general contour is peculiarly light and graceful, and vigour and alertness are displayed in every action. The comb is large, with a sub-serrated ridge, that is the ridge is but slightly dentated, in comparison with the comb of the *Gallus bankiva.*

13 SONNERAT'S JUNGLE FOWL.

The wattles are large and double. The hackles of the neck, the wing coverts on the shoulders, and the tail coverts are dark grayish, with bright golden orange shafts, dilating in the centre and towards the tip into a flat, horny, and very glossy plate. In some of these feathers the shaft takes an elliptical or oar-like shape, in others it puts on the appearance of a long inverted cone, from the centre of the base of which a battledore-like process arises."

" The feathers of the middle of the back, breast belly and thighs, are of a deep rich gray, with paler shafts and edges. The tail is of a deep, rich refulgent green, but the feathers which immediately succeed the hackles of the lower part of the back, and lie against the sides of the tail, are rich purple with a pale yellow edge, those next in succession are a golden green with gray edges, and all are glossed with brilliant metallic reflections. Bill, legs, and toes, yellowish. When seen in a bright sunlight, the plumage of this elegant bird glitters like gold, and presents a most rich appearance. The female is generally described as destitute of those expanded ornaments to the hackles and wing-coverts, which are so conspicuous in the male; and certainly we have not observed them on the specimens which we have seen.

" Sonnerat's jungle-fowl, the jungle-cock of the British, is noted for its prowess and resolution, insomuch that it is anxiously sought after by the cock-fighters in Hindustan, who rely on it for victory when pitted against larger game cocks. It does not appear however that the cock-fighters breed this bird in its purity; they seek after the wild birds, which soon become tame. Johnson in his *Sketches of the Field Sports as followed by the Natives of India*, informs us that the Sheccaries, a people of low caste in India, gain a livelihood by catching those jungle-fowls, and also other animals.

" In general habits and manners the jungle-fowl resemble their domestic relatives; the cock proudly leads his train of females, and vigilantly watches over their safety. On being suddenly disturbed the troop scatters in all directions, seeking safety under covert of the dense brushwood. In spots where they are numerous, the challenging of the cocks to each other may be heard on every side around, and yet such is their cunning and keenness of sight, that the sportsman, unless he is well acquainted with their habits, is often disappointed in his attempts to get a fair shot.

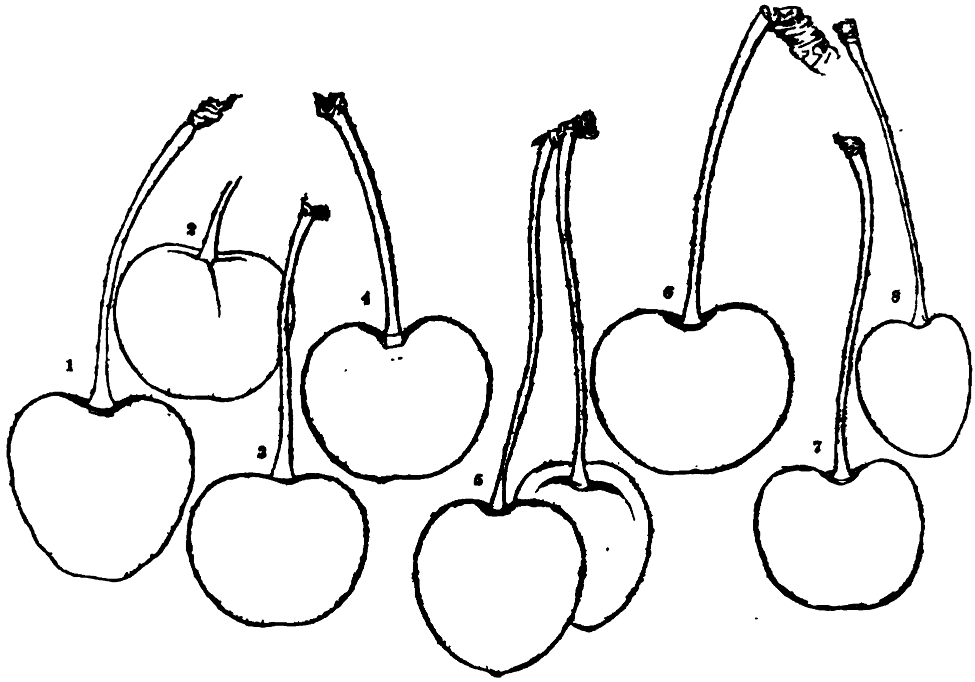
" Sonnerat and many other naturalists have contended that to this species alone are our breeds of domestic fowls to be traced. We think it most probable, notwithstanding the peculiarity of the plumage, and the circumstance of the throat of the female being covered with feathers, instead of being naked and wattled, that the *Gallus sonneratii* has intermingled with other breeds, or contributed to improve them—and among them we would enumerate the breeds of high-spirited game fowls kept for fighting by the Mussulmans of India, and which have been long celebrated; but we cannot admit that Sonnerat's jungle fowl is the sole origin of the domestic race. The *Gallus bankiva* and the *Gallus giganteus* present stronger claims to our notice, nor can we doubt they contribute the groundwork of some of our most remarkable varieties. There are several other species of wild jungle-fowl, to which we shall here only briefly allude, as they are not likely to have contributed to the establishment of the domestic race. One of these is the Bronzed Cock of Summatra, (*Gallus æneus*,) a fine species, remarkable for a large comb, smooth along the ridge. The neck is not covered with true hackles. Another is the Ayam-alas jungle-fowl or fork-tailed cock of Java, (*Gallus furcatus*.) This species has no true hackles on the neck, and the throat is adorned with a single large wattle only, springing from a central line."

In our next and succeeding numbers, we shall give descriptions and illustrations of other kinds of fowls, and the different classes of poultry.

Profits of Hens.

Dr. J. Barstow, of Chicago, kept an account of the expense and income of fifty hens, for one year. The cost of keeping on corn, was about twenty-five cents for each hen. The hens averaged ninety-one eggs each. One of the editors of the *Prairie Farmer* states that he has kept forty hens the past year; that the cost was about the same as given by Dr. Barstow; but the fowls averaged only sixty-five eggs each. The fowls in both cases were confined to a yard, but one lot of them were allowed to have their liberty for a part of each day. They were fed with fresh meat occasionally.

Large Poultry.—At a show held in England, under the direction of the late Earl Spencer, the following were the dressed weights of some of the poultry exhibited: The best turkey weighed twenty lbs. 4 oz.; capon, 7 lbs. 14½ oz.; pullet, 6 lbs. 3⅓ oz.; goose, 18 lbs. 2⅛ oz.; couple of ducks, 15 lbs. 10 oz.



1. *Black Tartarian.*—2. *Mayduke.*—3. *Black Eagle.*—4. *Knight's Early Black.*—5. *Elton.*—6. *Graffion.*—7. *Downton.*—8. *Downer.*

The Horticultural Department.

CONDUCTED BY J. J. THOMAS

The Eight Cherries

Selected by the National Fruit Convention of New-York.

THE National Fruit Convention, held last autumn in New-York city, selected through its fruit committee, and after deliberate discussion, adopted select lists of the different kinds of fruit, consisting of such varieties as thorough trial entitled to rank as *worthy of extensive cultivation.* Among them, the eight varieties of cherry were chosen, as figured above. A part of them may be old acquaintances to many of our readers, but we believe some remarks on the character of the *eight best and most thoroughly proved varieties,* cannot fail to be interesting to many young cultivators.

I. BLACK CHERRIES.

1. KNIGHT'S EARLY BLACK.—This excellent cherry was raised by the late President Knight, of England, from the seed of the Graffion or Bigarreau, fertilized by the Mayduke. It partakes chiefly of the character of the former, and is distinctly a heart cherry, the fruit being improved by the cross in an approach from the firm flesh of the Graffion to the tender juicy flesh and higher flavor of the Mayduke. The growth of the tree much resembles that of the Graffion. The fruit is large, very slightly irregular, or wavy in outline, obtuse, heart shaped, nearly black; stalk an inch and a quarter to an inch and a-half long, rather stout, *in a deep cavity;* flesh blackish crimson, very tender, juicy, of a rich, sweet, and excellent flavor. In quality, it resembles the Black Eagle, but is slightly larger, earlier, and is readily distinguished by its much deeper cavity at the stalk, and by the more downy axils at the midrib on the under surface of its leaves. The figure represents the average size only; larger specimens are often found. It ripens about the middle of 6 mo. (June.)

2. BLACK TARTARIAN.—A well known and most popular variety, which originated in Russia. The growth of the tree is vigorous, the branches erect, leaves large, dark green. Fruit quite large, often an inch in diameter, but on the densely loaded branches of full bearing trees, sometimes not more than seven-eighths of an inch; heart-shaped; surface uneven or wavy, glossy; blackish crimson, becoming nearly black; stalk an inch and three-quarters long, moderately sunk; flesh dark crimson, not very juicy, sweet, rich, moderately high flavored. Ripens nearly the same period as the preceding.

3. MAYDUKE.—Another well known and excellent cherry, very hardy, and adapted to nearly all climates in which any varieties thrive. In richness of flavor it is unequalled among the class of sour cherries. Fruit large, varying from roundish to obtuse heart-shaped; changing from red to nearly black; flesh dark red when ripe, very rich, juicy, acid, and high-flavored. The growth of the tree, although somewhat irregular, has unusually upright branches for the sour class. It is remarkable for the variable period of its ripening, commencing early in 6 mo. (June) and often continuing 6 weeks; the same tree often bearing ripe fruit on one part and green on another, and in rare instances, ripe fruit has been found growing side by side with green and half-grown specimens. The fruit is usually gathered long before full maturity, and before the flavor is at all developed, and hence many who have eaten it for years, are ignorant of its real excellence.

4. BLACK EAGLE.—A cross of the Graffion and Mayduke, much resembling Knight's Early Black, but distinguished as already pointed out. Rather large, obtuse heart-shaped, blackish crimson or nearly black; stalk moderately slender, an inch and a-half long, but little sunk; flesh dark crimson, rich, high flavored, less bitter than the Black Heart, and less insipid than the Black Tartarian,—which in time of ripening it immediately succeeds.

II. LIGHT COLORED.

5. ELTON.—Raised by President Knight from seed of the Graffion, fertilized with pollen of the White Heart. Fruit rather large, ovate heart-shaped, somewhat

pointed at apex, often a little oblique, reddish yellow in the shade, red in the sun; stalk two inches long, slender, slightly sunk; rich and very high-flavored; stone rather large. It ripens immediately after the Black Tartarian, and has proved very productive in Western New-York. It is one of the few cherries which have strongly colored reddish-purple petioles.

6. GRAFFION, *Bigarreau*, or *Yellow Spanish*, the *White Bigarreau* of Manning. Very large, often an inch or more in diameter, obtuse heart-shaped. flattened at base, smooth and regular; pale waxen yellow in the shade, a bright red cheek in the sun, with minute intermediate carmine dots; stalk rather stout, one and a-half to two and three-quarters of an inch long, in a wide, shallow cavity; flesh yellowish white, firm, sweet, of a good but not very high flavor. It ripens after the Elton or the latter part of 6 mo. (June.) Its popularity is increased by its size and beauty, being one of the smoothest and most finely colored of all cherries.

We have tried to adopt the name Bigarreau, as given by Thompson and Downing; but from the great number of other varieties called Bigarreau, each of which has some distinctive epithet, while this has none, difficulty has arisen, and we have concluded to return to the old name, Graffion.

7. DOWNTON.—Large, obtuse heart-shaped, roundish, surface slightly wavy; light yellow, intermixed with dots and shades of light red; stalk one and three-quarters to two inches long, in a rather large cavity; flesh yellowish white, tender, delicate, of a sweet, rich, and excellent flavor. Not so handsome as the Graffion, but superior in flavor, and ripening nearly at the same time, or scarcely later.

8. DOWNER, *Downer's Late*, or *Downer's Red*.—Originated at Dorchester, near Boston, and is the only one of these eight varieties, of American origin. It is medium in size, very regular round heart-shaped; bright red, becoming darker and full red when ripe; stalk one and a-half to one and three-quarters inch long, in a very even small cavity; suture a single line on one side; flesh soft, with a high and very good flavor. Like all high-flavored varieties, it requires full ripening to become good. It ripens some days after the Downton and Graffion. The growth of the tree is rather erect, more so than any of these eight sorts, except Black Tartarian. It is very productive.

The figures given, were all drawn from specimens of medium size under good culture, grown in western New-York, and do not perceptibly vary in size with those grown in other regions of the country.

Selecting Varieties of Fruit.

Judging from Books and Nursery Catalogues, an inexperienced cultivator would be struck with the mighty host of rich and splendid varieties in cultivation; and would perhaps consider it only necessary to make a radom plunge into the vast collection in order to obtain a choice number, more or less, as he might need. Single nurseries contain in some instances hundreds of varieties, all, of course, worthy of cultivation,—else why would they be cultivated? The London Horticultural Society has 900 different varieties, after rejecting several hundred others as worthless. In this country, in addition to the existing multitude, new sorts are constantly springing up and rising into notice with high recommendations.

At the late American Congress of Fruit Growers in New York City, a motion was made by a distinguished member, to *cull* from this vast assemblage—to reject all but the very finest, and to appoint a committee to bring in a SELECT LIST of 100 sorts of apple, 100 of pear, 50 of peaches, &c. A committee of nine was appointed, without restricting them to the exact number, and they immediately commenced the work of selection. They adopted a liberal basis—did not agree to pronounce all their recommended fruits as *first rate*, but only worthy of *general cultivation*; they did not require a unanimous vote in committee in favor of any sort, but only a two-thirds majority; and they agreed to propose to the convention as large a list as they could thus agree upon.

Very well,—and what was the result, with all this latitude, and with this host of varieties to select from? After several hours of labor, the committee could agree to recommend but TEN *varieties for* GENERAL *cultivation, and* FOUR *for* PARTICULAR LOCALITIES. A great number of others were proposed, but none passed examination. The great Pomological Garden of Robert Manning at Salem, contains a thousand varieties of *pear* alone;—the committee could agree to recommend twelve as worthy of general cultivation. *Nine* Peaches, *eight* Cherries, and *eight* Plums, were all that were chosen of these respective species. Indeed, so difficult was it to propose any sort, to which some serious objection was not known by members of the committee, that it was admitted that but little could be accomplished, unless *new varieties of the right stamp could be manufactured to order.*

The truth is, there is a very large number of fruits, and especially apples, in all parts of the country, that are *almost* first rate, and *almost* worthy of cultivation; but having reached that particular level it seems nearly impossible to strain the point a single notch higher. Hence, if the cautious cultivator, after procuring a hundred new and highly praised sorts, shall find *one* that is decidedly first rate, and excellent in every particular, he may regard his labor as well repaid. But it should be constantly borne in mind, that no new fruit deserves adoption, which is not decidedly superior to old varieties of the same season of ripening, in at least one important particular, superadded to fine quality.

Preserving Grafts.

We are often asked, if grafts may be cut in winter and kept in good condition a month or two before setting in spring. When we answer that we have kept grafts cut in the latter part of summer until the following spring, in a fresh state, and which grew and flourished, the difficulty will vanish.

Many persons mistake the mode in which scions are spoiled in keeping. We sometimes see the cut ends carefully covered with wax, to preelude the escape of moisture from the sap pores, and at other times the ends are stuck into a potato, for the same purpose. Now, it happens that nearly all the moisture escapes through the pores in the bark; hence it is of greater importance that the sides of the shoot be well covered with a moist substance. Many cultivators preserve grafts in good condition by partially or wholly burying them in the earth of a cellar; but they become thus covered with sand and grit, and injure the grafting knife, unless well washed. Another mode, avoiding this difficulty, and by which grafts may be bept through winter, is to bury them, out doors, in a box open at the bottom only, the grafts being kept from contact with the earth below them by cross sticks in the box. But the best mode, is to fill a large box with fine pulverised moss, or still better, with moist saw-dust, in which the grafts are simply immersed, and which are thus packed away or withdrawn with the greatest ease, at any desired moment. A box of sawdust, in a cool cellar, will remain moist without watering for many weeks. Too copious or too frequent an application of water, would cause decay in the buds. On the other hand, a slight withering is safely and gradually restored by a moderate increase of moisture. In one in stance, we received a bundle of grafts in autumn, from some hundreds of miles, the leaves being left on to keep them moist, but in reality causing them to wither rapidly by throwing off the moisture. When received they were quite dry; but they were well encased in moss, and buried in the earth till next spring, when they were perfectly plump, and being set, all grew.

Grafts or buds, to be forwarded by mail, may be kept fresh, by wrapping each shoot in oil-cloth or oil-silk, (such as is used for lining straw hats,) drawing it closely around it by means of fine thread. This encloses all the moisture in an air-tight casing, and it remains unchanged for many days.

Management of House Plants.

INQUIRIES are frequently made as to the successful management of green-house plants, which are kept in the rooms of dwellings. A chief error in their winter treatment, consists in making no distinction between their condition while rapidly growing, and in a dormant state. When vegetation is in full progress, warmth and a large supply of water, are indispensible. But during the period of rest, plants should be kept cool and rather dry. A temperature of 50 degrees is much better than that of ordinary living-rooms. While in this stationary condition, very little moisture is given off through the leaves; while growing, it is thrown off rapidly. Hence water is to be applied very sparingly, and at remote intervals, in winter; as very little escapes by direct evaporation from the soil. So long as a moderate degree of moisture is found beneath the surface of the soil in the pots, watering should be omitted. Thorough drainage is also of importance, and is well effected by filling one-fifth of the pot at the bottom with fragments of charcoal. Washing the foliage from dust, should be attended to, and may be conveniently done by syringing with *tepid water*, turning the pot at the moment on its side, that the soil contained it may not be too much soaked. In the absence of a syringe, a small watering-pot, with fine perforations, held at a little height, will answer a good purpose. The chief requisites, then, for good management, may be summed up as follows:—

1. Spare watering;
2. Low temperature;
3. Plenty of light;
4. Drainage;
5. Washing foliage.

Prices of Fine Fruit.

In many parts of the country, a greater number of trees have been set out within the past five years, than during the whole previous period back to the settlement of the country. Many have hence believed that the market would be surfeited when these bear, and hence have ceased to set out trees. Is their judgment correct? Let us glance at a few facts.

The great peach orchards of New-Jersey and Delaware have long been famous, many occupying a hundred acres or more, and one, the celebrated orchard of the Reybolds, covering a thousand acres,—whose crops were so large as to give constant employment to two steamboats and a schooner in conveyance to market. As a consequence, the price of peaches has fallen quite low in comparison with former times. Much smaller orchards, near smaller cities, have glutted the market. But it must here be observed, that the peach is a very perishable fruit, and can be kept a very few days at longest. Plantations of perishable fruits for market, are therefore to be made with some caution; but the objection will scarcely exist with such as keep for months.

If one large city will afford market for but a few steamer-loads of peaches,—which must all be consumed within three days after being purchased,—fifty times the amount of keeping fruit will find consumers, if it may remain on hand for months together. Especially will this be the case, when it is remembered that peaches make their appearance amid a profusion of other fruits; while keeping fruit extends its period of use into the dreary season of the year. But, a single city no longer becomes the limited market for such fruits; the whole country is open; and no night-and-day labors are needed to hurry them into market before decay seizes them. Railroads and canals will take them to any part of the Union; and not only this, but millions in Europe are ready to consume our fruits when our orchards furnish a cheap supply.

The Newtown pippin has already found its way to Europe; but the amount at present, when compared with what it is destined to be when orchards are profusely multiplied, and facilities, and cheapness, increased, is but the slender rill to the mighty river. To produce this great increase, the prices of varieties for export need not be extremely low. They are now high. In the great apple region, Western New-York, the orchardist gladly disposes of his good winter apples for seventy-five cents per barrel, and then makes more from a few acres of orchard than from a hundred-acre farm besides. The Northern Spy, a productive variety, long-keeping and handsome, is eagerly bought at two dollars and three per barrel, for home consumption. Good Newtown pippins in quantity command a high price; and well cultivated orchards of them, in favorable localities, must afford a very comfortable profit to the owners, even when the fruit is much cheaper than at present, a thing by no means certain to take place during the present age, with a whole hungry year and hungry millions ready to consume them. The price of good winter apples at the present moment in Western New-York, does not vary ten per cent. from the price thirty years ago, nor has it fluctuated much during the long interim.

In many parts of the country, the White Doyenne or Virgalieu pear; is a remarkably healthy and productive tree, and yields uniformly fine and fair fruit. Crops from single trees of ten to fifteen bushels are frequent. The fruit raised so far north, matures late, and may be sent hundreds of miles to market. In New-York city, it sells readily for three or four dollars per bushel. Let, for the sake of argument, the trees be increased, so that the cultivator may get but fifty cents per bushel; would not the city demand for them, immediately increase fifty fold? All could then afford to eat them. Now, an acre, of a hundred trees, each bearing but five bushels as a yearly average, would give, at this reduced price, two hundred and fifty dollars a year from the acre—or an interest on some thousands of dollars.

With such facts as the above, we are compelled to conclude that the time has not yet arrived for landowners to withdraw their attention to an increase of their orchards—but that while the population of the country, and facilities for conveyance, are multiplying so rapidly, prices of suitable varieties are as likely to rise as to sink below their present rates.

Early Lettuce.

The late Judge Darling practiced a mode of obtaining early lettuce, which would prove of value to all who cannot take the trouble to make hot-beds. Commencing with the well-known fact, that lettuce will bear considerable frost, and sometimes survive the winter unprotected, he applied various coverings, as straw, corn-stalks, stable litter, leaves, boards, mats, and even a large inverted box, enclosing plenty of air, but in all these cases the plants perished. Judging that the failure might result from want of light, he applied a sash of lights to a bed of lettuce sown early in autumn. Entire success followed.

The frame, to be warm, was made thick, being constructed of six inch scantling, laid up like a log-house, sloping to the south, as in a hot-bed. The only care needed till spring is, that the snow does not become so heavily piled upon the glass as to endanger the panes, which, if small and thick, will not be the case. Raising the sash to admit air, when warm weather approaches, is all that is necessary. Spring rains should be admitted; or watering given.

We have obtained fine early lettuce, by transplanting fall-sown plants, which had remained dormant through winter, into a small hot-bed, made about the time the frost disappears from the soil, and which thus came into use two weeks earlier than from seeds sown directly into the soil of the hot-bed.

The Early Tillotson Peach.

Some of the finest fruits are slow growers in the nursery. The Sine Qua Non apple, one of the best and most productive early varieties, is of slow growth. Hence it has never been a popular fruit with nurserymen, with whom handsome and thrifty growth is a very important requisite, so long as purchasers regard the appearance of the tree they buy, more than the quality of the fruit it is to bear. For this reason, the Early Joe, a superlatively good apple, but of slow growth, will not probably become very popular, until the public find out that fine fruit and good cultivation, are quite as important as pretty trees when young.

It is for the same reason that the Early Tillotson peach is disliked and underrated. A nurseryman at first sees the tree only, which is not of handsome growth, and the leaves are often much covered with mildew towards autumn. He perceives at once that it cannot attract the attention of buyers, and it is neglected. But where it has come into bearing, it is better appreciated. It often requires two years from the bud, for the trees to attain the size of some other trees of only one year; but in many instances noticed, the old or bearing trees, growing more freely, are as large as other sorts of the same age. We have noticed bearing trees of all ages, from five to twenty years and more, and they would not suffer by a comparison with three-quarters of the other popular varieties of the same age, either in size or productiveness.

The season of ripening is very nearly the same as the serrated Early York, but is more variable, often considerably earlier, and sometimes even perceptibly later.

This peach appears to flourish at the south even better than here. T. S. Pleasants, near Petersburg, Virginia, says, " Among a great many fine varieties, there is none, taken altogether, that I esteem so highly as the Early Tillotson. It is of full medial size; its flavor scarcely to be surpassed; and in time of ripening it is earlier than any other peach of merit I am acquainted with. Had I only known its excellence in time, and planted as extensively as I might have done, it would have yielded me this season a large sum." At Edwards, Miss., it ripened on the 20th of 6 mo., (June,) one day earlier than serrated Early York; and at Mobile, Ala., on the 10th of the same month. A Mobile correspondent of the Horticulturist says, his trees were planted in 1847, " and from the few specimens on the trees this season, [1848,] I think they will be as good as could be desired." The trees must be kept well pruned, by the shortening-in mode, to have the fruit in perfection; we have frequently had fine, handsome, globular specimens, two inches and a quarter in diameter. Many persons prefer its flavor to that of the serrated Early York, the reverse, however, often being the case. We do not regard it, taken altogether, as a variety of so high merit as the serrated Early York; but we consider it as too valuable to be rejected.

Orchards of New Hampshire.

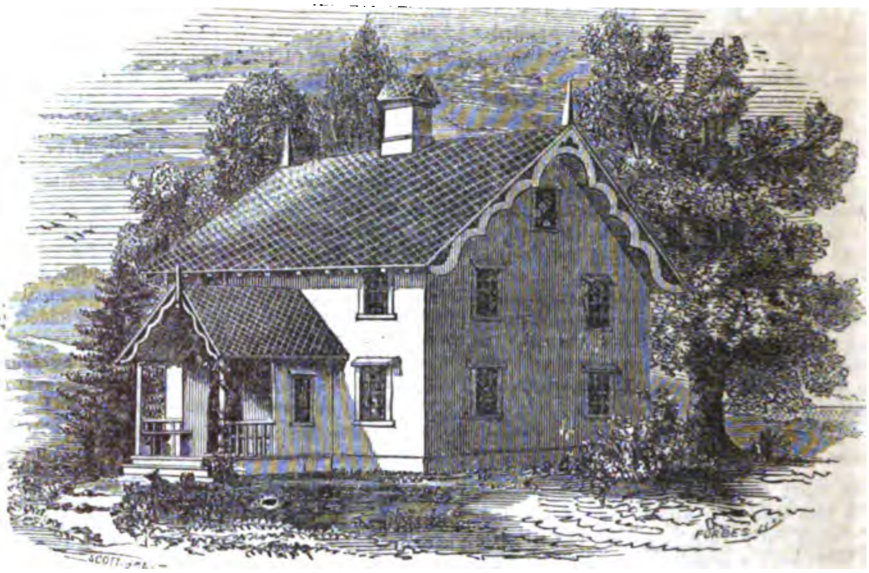
In this locality, the first care of the settlers, was to plant an orchard. This was done on the best land their premises afforded; and as corn and grain produced without manure, that was put around the young apple trees. Consequently the trees grew rapidly and commenced bearing early. The great object for which an orchard was wanted, in those times, was cider, which was considered an almost indispensable beverage. I now see an orchard from which 70 to 80 barrels of cider have been manufactured in a single season, the whole being *consumed in the family*.

My grandfather settled here about eighty years ago, and cleared up from the wilderness. He planted an orchard of about eighty trees, bringing them from Plaistow, forty miles, *on foot*; and in ten years from the time they were set out, he made from them nine barrels of cider. Being highly manured, they matured quickly and decayed early, so that now only seven of them are left, and those are decaying. Such is now the fate of the first planted orchards; but new ones have been planted, and the character of the trees has been changed by grafting—fruit for market and domestic purposes, and not cider, being the object now. It is gratifying to see the change that has taken place within a few years in this respect. Thousands of scions have been set the present year, some sending to Boston for new varieties, and others procuring the best here. But from the manner in which *some* graft, we might conclude without further evidence, that they did not read " The Cultivator," otherwise, to say the least, they would not set scions in the extremities of the limbs of large and decaying trees. But these same individuals would no doubt be *horrified* at the idea of so far compromising their dignity as to admit they could learn anything from an agricultural publication! Here, as well as elsewhere, there are those who *know too much to learn!*

We have a young orchard of grafted apples, in which are some excellent varieties, and some that are inferior. The individual that grafted this orchard was *rascally* enough to put in scions taken from ordinary trees. Such a course cannot be too severely condemned, and the person who would do it is almost too *mean* " to get a living by stealing." The safest course is for every farmer to do his own grafting, or at least to select his own scions; and then, if, after waiting anxiously a number of years, he finds his trees bear inferior fruit, he has the *satisfaction* of knowing that there is no one to blame but himself. With good tools and grafting wax, and care in setting, every one may graft his own trees, and he will find his advantage in so doing. W. L. EATON. *East Ware, N. H., November* 20, 1848.

Seasonable Hints.

During mild weather in winter, hardy fruit trees may be pruned, as well as grapes, and grafts may be cut. Young fruit trees, which have not had a conical bank of earth thrown round them,—the most perfect protection from mice—should have the snow trodden round them as often as it freshly falls, which will exclude the mice from them. Catterpillar eggs—known at a glance by their knobby clusters on the smaller branches—should be torn or cut from fruit trees before they hatch in spring.

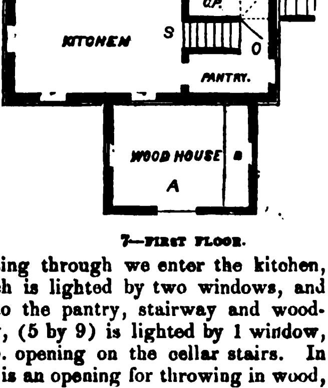


6—ELEVATION.

Rural Architecture.

Plan of a Small Farm House.

EDS. CULTIVATOR—Enclosed is a plan and perspective view of a SMALL FARM-HOUSE. It will be seen by a glance at the plan, that the house is nearly square—the cheapest of all forms. The size is 29 by 26 feet, with a hall and porch, together 10 feet square, and a woodhouse in the rear, 12 by 16 ft The hall is placed in the middle of the front, and may be lighted by a window on each side, of the width of one glass, or by a window in the door. From the hall, we enter the sitting room, which is 12½ feet wide by 18½ long, lighted by 2 windows, and has a crockery closet at *c*. At the left as we enter, is a bed room, 9 by 12½ ft. with a large clothes press under the stairs; passing through we enter the kitchen, 12 by 18½ ft., which is lighted by two windows, and has doors opening to the pantry, stairway and woodhouse. The pantry, (5 by 9) is lighted by 1 window, and has a door at *o*. opening on the cellar stairs. In the wood house, A. is an opening for throwing in wood, six or seven feet from the floor, four feet square, closed by a door; B. is a work-bench, with a window over it.

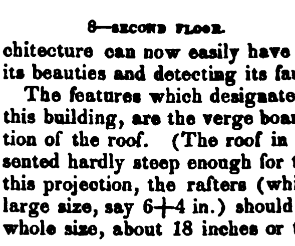


7—FIRST FLOOR.

On the second floor are four fine bed rooms, three of which have commodious closets. The garret can be reached through a scuttle near the chimney, by means of a light ladder, which, when not in use, might be placed against the wall at L. The first floor is intended to be nine feet high, the second eight. The cellar might be made under the whole house, or only under the back half. O. is the outside cellar stairway.

It will be objected by many, that this house has no parlor. This plan is not intended for those who have the means to build a room *especially for company*, but for that large class of farmers, who, while they desire something convenient and tasteful, cannot afford to pay for a room which they do not use themselves.

A glance at the plan will show, that it is intended to be built of wood. For the outside covering, perpendicular boarding is preferable to clapboarding, because it is firmer and cheaper. I hope the exterior that I have sketched, is sufficiently expressive of ruralness. Although the desire for novelty, and the wand of fashion, have done much towards creating the prevalent rage* for Rural Gothic dwellings, yet the intrinsic beauties of the style will always command for it the admiration of the rural architect, and it has now become so common in most parts of our country, as no longer to be considered a fantastic novelty by the staid portion of our people. All who examine the various forms of domestic architecture can now easily have opportunities of seeing its beauties and detecting its faults.



8—SECOND FLOOR.

The features which designate principally the style of this building, are the verge boards and the bold projection of the roof. (The roof in the engraving is represented hardly steep enough for the style.) To support this projection, the rafters (which should be of rather large size, say 6+4 in.) should run past the plate their whole size, about 18 inches or two feet.

The square end of the rafter, is, I think, a decidedly ornamental feature of the otherwise plain eaves. The verge boards I have represented in the heaviest style that is admissible, because any but *substantial* *looking* ornaments are out of place on a farm house, and as a kind of example to operate against the other extreme—flimsiness. The only finish necessary for the roof projection, is, that the roof-boards over the projecting part should be of inch and a-half stuff, (to prevent the shingle nails from coming through) planed on the under side, and matched. The eave trough might be of tin and nailed to the roof, or formed by nailing a narrow board to the edge of the lower roof board. The ceiling of the porch should be made in the same way as the roof projection; the posts of six inch stuff made octagonal by trimming off the corners, the top and bottom being left square. The front door I have represented in the drawing as pointed. As, however, there is no other feature of the kind in the house, I have come to the conclusion that it looks ambitious and out of place, and I beg leave to have the reader consider it square. To the chimney I have sought to give an ornamental effect, by capping it with two slabs of stone.

I will conclude with a few words in regard to the interior finish. In all parts of our country *pine* is the material most used for the interior woodwork of dwellings, and it is a common practice to cover it with white paint. How such a practice could ever have obtained, among an intelligent people, I cannot understand. Its warm lively color, when freshly planed, is peculiarly adapted to give to rooms a cheerful and smiling expression. When we know that this pleasing tint can easily be preserved, and rendered even more soft and bright by varnish, at no greater expense than would be incurred in giving it a good coat of paint, can we help being surprised that its beauties have been so long carefully concealed by the cold glare of white paint? Besides, the color of the pine, as brought out and preserved by varnish, harmonizes with furniture much better than any paint, and would of itself add much, apparently to the furniture of a room. Darkened and mellowed by time, it would at length, with the inmates of the house, assume that sober though still cheerful expression, which gives to age one of its greatest charms.

While on this subject I will say a word about black walnut, which, where the intention has been to varnish, has been used more than any other wood for the interior finishing. It has been much used in cabinet work, and is one of the most beautiful of our native woods. Its dark rich shades impart to the lofty apartments of mansions a stately and appropriate dignity, but for the rooms of ordinary residences, its sombre hue renders it quite inappropriate. And were I to have the choice of two evils, I would prefer white paint with its glare to black walnut in its gloom. F. J. Scott. *Toledo, Ohio.*

The Working Woman's Cottage.

Editors of Cultivator—Thinking I may be of some use to the class to which I belong, I herewith send you a plan of a " Working Woman's Cottage," which is particularly adapted to her use.

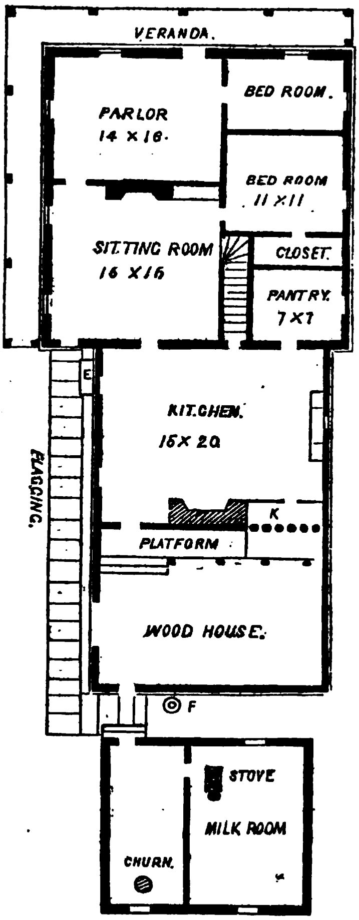
In sketching this house, my first and most important object is convenience; the next is pleasantness; the third, is economy in cost of building; the last, is a tasteful and inviting appearance.

The main part of the house is 27 by 30 feet, one story and a-half high, with attic windows, above the veranda; these windows answer every purpose for chambers, and are an ornament to a house.

The veranda will be in front and on one side, with 2 doors and 4 windows opening upon it, the blinds must be alike to all, reaching to the floor.

What a delightful place for the family group to assemble in and spend the fine summer evenings, after they have finished the labors of the day. If any abode on earth ought to be pleasant, it is that of a working family, their social privileges being more limited.

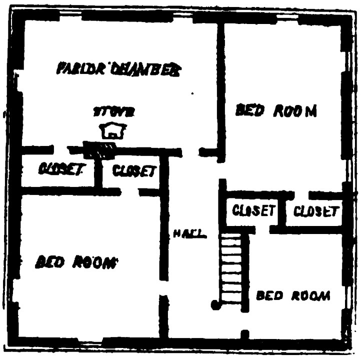
The platform under woodhouse, should be large enough to wash on in the summer. E. Outside cellar door.—F. Pump.



9—First floor.

As you enter the kitchen fr'm the woodhouse first comes the cooking stove, and fire place, next the closet, (K.) for kettles, and many other things not fit to be put in the pantry; next, if you wish, the shelf for the water pail to stand on, the sink, with a shelf at the left hand to put dishes on; then the pantry door, with a space between that and the cellar door.

Next in order is the sitting room, a pleasant convenient room; the working woman's sitting room, will also be her nursery, her library, her vestibule; her bed room, is pleasantly situated with a convenient closet, her parlor is handy by, where she can use it at any time; her kitchen will also be her eating room, except in very warm weather. The chimney is to be built from the bottom of the cellar, with a fire-place if wanted. Stoves are best in winter, fire-places in spring and fall.



10—Second floor.

I omit a hall, for the sake of convenience, to get the number of rooms wanted in a certain space, also to have doors, opening upon the middle of each veranda.

This house contains all the room a common sized family needs, with four sleeping rooms up stairs and two below.

Some men will place a veranda on one side of a kitchen, and bed-room and pantry on the other; such kitchens are good for nothing to work in.

Those little attic windows are so nice and convenient for chambers, so easily cleaned, just high enough to look from when sitting in a chair, and are out of the way of children. I do detest large chamber windows, coming almost to the floor; it is such a *big job* to clean them, and so much danger of children falling out.

What can be more unwished for, than a great house on a farm, with two or three flights of stairs? I would not purchase a farm with such a dwelling house upon it, unless I wished to live in perfect slavery.

A farmer's wife has exercise enough during the year, without more room to take care of than is actually necessary.

How many great awkward 2-story farm houses, we see, with the front part shut up and inhabited only by spiders and flies. Then little cottages, with two or three wings patched on to them; if their internal arrangement is as irregular as their external appearance, they must be prodigiously inconvenient.

I do wonder that men of sense, will erect such dwellings. When some persons undertake to build a farm-house, the first and most important consideration is to be sure and have it look well on the outside, to arrest the attention of the passer-by. When this purpose is accomplished, they are abundantly satisfied; it matters not how inconvenient or unpleasant they are within.

Some persons think a milk-house, ought to be built partly of stone, with stone floor. This is a mistake; stone causes dampness, which prevents cream from rising. Milk requires a dry, cool place.

There ought to be shade trees, on the south and west side of the dairy house. This house will be easily built, easy to live in, easy to be paid for. The cost, including dairy house, if well built, about 1,000 dollars. This is just as I should want a house at all times and seasons.

If necessary or desirable, the space at the side of the kitchen chimney, marked for kettle closet, could be converted into a bathing room, and but a trifling expense would be necessary to construct a shower bath, and might save sickness and the dreaded "doctor's bill."
A Farmer's Wife. *N. Y.*

An Acrostic.

Another year, its wings hath spread,
Light sits the crown upon its head;
Bring flowers of Hope, a garland twine
Around the infant Forty-nine—
Nor seek to stay his flight with tears,
Yet stored for sins of former years.

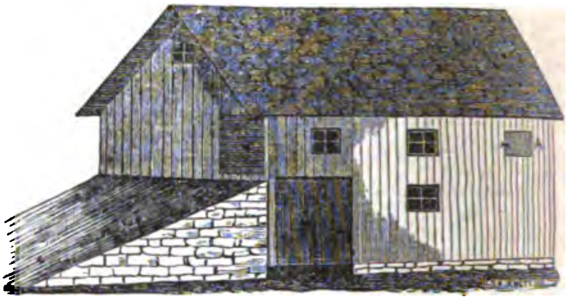
Contributors and patrons dear,
Untrammelled we present our cheer—
List'ning to all, with willing mind,
To find the *truth* we're still inclin'd;
Intending always to advance
Various improvements, which, perchance,
Assist the hardy sons of toil,
To become masters of the soil.
Onward our course—which to maintain,
Remember, friends, your aid we claim.

Economy of Labor may be attained in many ways upon the farm, by the exercise of thought. A single example,—by building the barn on a side hill, so that the loaded team may be driven pretty well up towards the roof, and so that the load may be pitched down instead of up, would prevent a great deal of hard exercise of sinews in elevating the loaded fork.

Analysis of Soil.—Pro. J. P. Norton of Yale College, thinks that a good agricultural chemist cannot be made with less than two years of experimental study, in this particular department.

A Two-story Sheep-Barn.

The annexed engraving represents a barn for sheltering sheep. The plan is adopted and recommended by Mr. S. W. Jewett, of Weybridge, Vermont. It will be seen that the building has two floors for the sheep—thus doubling the accommodations. Mr. J. says, a shed 18 by 26 feet, with posts 13 feet high, will make room for two flocks of sixty in each, including the space occupied by the feeding boxes. The sheds should be lighted and ventillated by slide windows on each side.

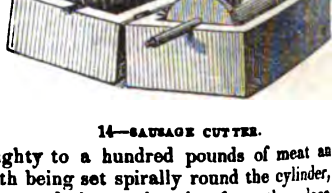


13—two-story sheep barn.

"Some of these sheep-barns," says Mr. J., "I build of sufficient size to contain hay at one end. The cut here given shows one of this class, 25 by 34 feet; 12 feet at one end is occupied for storing hay; the door represented at A. is the pitching hole. The basement is constructed with double doors of sufficient width for backing in a cart or sled. To accommodate in loading the manure from above, we raise a plank in the floor. Some of these sheds are erected near our hay-barns, where we can take advantage of the rising ground to obtain access for the sheep to the upper story. At other places the ground is artificially raised at one end, as in the accompanying draft." It is proper to remark that the upper floor should be so tight that the manure and urine should not fall on the sheep below, as it would injure their fleeces.

Sausage Cutter.

The annexed cut represents a valuable machine for cutting sausage meat, where the business is extensivelycarried on. It is very generally used in the New England states. It makes a great saving of labor over the old mode of chopping. One man can cut from eighty to a hundred pounds of meat an hour. The teeth being set spirally round the cylinder, the meat is conveyed, in turning it, from the place where it is put in, to the opposite end of the machine, where it is discharged through an orifice in the under side. It is made sufficiently fine by being once passed through. The price of the machine is $12.50. A smaller kind, which will perform the work by the meat being passed twice through, is sold at $5. For sale at the Albany Agricultural Warehouse.



14—sausage cutter.

The Farmer's Note-Book.

Culture of Cotton.

We have lately received a pamphlet on the composition of the Cotton Plant, with suggestions as to the use of manures, and the proper cultivation of the crop. The author is Thomas J. Summer, Esq., of South Carolina, who carried on his analytical investigations in regard to the subjects here treated of, in the laboratory of Liebig, in Germany, and we are informed that the correctness of the results is sanctioned by that celebrated chemist. The work, however, is not offered as the basis of a new theory for the production of cotton, but merely as suggestive of a more profitable mode of cultivating the plant. After having stated the result of the analysis of the plant and the seed, the author submits some remarks in regard to cultivation and manuring, which are deserving the attention of every cotton planter. His first suggestion is the adoption of a system of *fallowing*, for which he gives the following reasons:—

"A system of tillage, which carries away annually so large a portion of these natural essentials to vegetation, and which provides no means of returning them, must necessarily impoverish any soil. A fixed principle in the agriculture of all countries where the prosperity of the future has been at all regarded, has been, the gradual but certain improvement of the soil. This is necessary for the support of increased population, and in the slave states, where there has been such an extraordinary and rapid increase of the laboring population, it should never be lost sight of. The intensity of our southern sun-shine, prevents, in a great measure, the annual coat of grass which supplies vegetable matter to the soil in northern climates, and the never-ending occupation of the soils, by our system of culture, prevents the natural improvement which in other countries is carried out by fallowing. We are well aware that fallowing is generally objected to in the south, and we think where fallow is converted into pasture land, and taxed during the whole season for the production of herbage to sustain greedy herds, the system might well come into disrepute. Planters too, object to fallowing, and say they have not land enough to allow one-half to lie idle, but reason and justice to the noble occupation of agriculture, allows this objection to pass unheeded; and its fallacy is proven by the desert wastes of "*old fields*," an agricultural feature only common to the New World, and we blush to say it, only visible to the southern planting states. In Europe, where arable soil compared to population, is a thousand times scarcer than in the southern states, the agriculturists find fallowing a remunerating system. It is but little understood in American agriculture, and we may be pardoned for giving the proper details for fallowing, believing it to be the *cheapest* manner of renovating our soils. A field intended for fallow, should be deeply plowed in mid-winter, the deeper the plowing the better. This is simple preparation, but nevertheless, necessary; and above all things, keep every description of stock off the field. The porousness of the soil will facilitate the assimilation of the natural salts of the earth, and atmospheric action, with the dissolving influence of the rains, will generally bring to the aid of the succeeding crop, a sufficient quantity of these for its production. Late in autumn the herbage should be turned under. This process exerts a chemical and natural influence beneficial to the soil; first, as by decomposition of vegetable matter carbonic acid is produced, which is known to act as a powerful solvent of phosphated alkalies; secondly, those portions of the grass and weeds, not readily decomposable, when admixed with the soil, gives it that friability so necessary to easy tillage, and thus aids the agriculturist in his future labors. A system of green fallows might, by the aid of the Black and Red Tory pea, be judiciously adopted in the cotton growing states. Owing to their imperviousness to wet, they can be sown in mid-winter, and vegetating in the spring, without the aid of cultivation, generally make, upon ordinarily productive land, a sufficient crop to protect it from the sun in summer, and smother out those weeds which are such a pest to cultivated crops. The constituents of the Indian pea—known to be in a great measure derived from the atmosphere—would, in all probability, furnish a better green crop for subversion, than the natural grasses and weeds."

As an auxiliary to fallowing, he recommends the application of compost of muck, leaves, and other vegetable matters, with animal excrements; also bones, guano, wood ashes, and lime. He recommends dissolving the bones according to the mode practiced by Prof. Liebig, as follows:—"Pour over the crushed bones or bone ashes, half their weight of sulphuric acid, diluted with four parts of water, and after they have been digested for twenty-four hours, add one hundred parts of water; sprinkle this mixture over the field immediately before plowing. By its action, in a few seconds, the free acids, uniting with the bases contained in the earth, a neutral salt is formed, in a very fine state of division. Experiments instituted on soils, for the purpose of ascertaining the action of manure prepared in this manner, have distinctly shown that neither grain nor kitchen garden plants suffer injurious effects in consequence, but that, on the contrary, they thrive with much more vigor after its application."

Culture of Potatoes in Kentucky.

Eds. Cultivator—The rapidly increasing trade and population of New Orleans, together with the immense floating multitude upon our western waters, renders the potato crop one of considerable importance. Up to the 4th of November, of the present season, *thirty-five thousand eight hundred* barrels, are reported to have been shipped from the port of Louisville, nearly all of which were raised within the immediate vicinity of the city, several individuals having planted *one hundred* acres each.

As our mode of cultivating this crop differs in some particulars from that practiced in some other portions of the Union, I will briefly describe it.

The variety now mostly esteemed and cultivated, is the Neshannock or Mercer, producing a small top, and the tubers forming immediately at the base of the vines, they occupy less space than most other kinds. None but the best and largest seed should be planted. The old and long cherished plan of planting "*in the dark of the moon in June*," has mostly been abandoned, and they are now planted as early in the spring as the ground is in a fit condition to work. It is thoroughly plowed, as deep as it can conveniently be done, and harrowed. The rows are then laid off with a two-horse plow, about two and a half feet apart. The seed should be cut into pieces of two or three eyes each, and exposed to dry for several days before it is planted. The pieces are dropped about eight inches apart in the rows. The covering is done with a one-horse plow, throwing a full furrow. As soon as the plants begin to appear near the surface of the ground, the whole is again harrowed across the furrows, leaving the ground level, and entirely destroying the young weeds. In eight or ten days the cultivator is passed twice between the rows; and when the plants have reached the height of eight or ten inches. they are braced up by throwing with a single plow, a moderate furrow on each side. This again covers and destroys the weeds. The crop is now "laid by," except in some cases where it may afterwards become necessary to "chop out" some of the largest weeds.

The harvesting and shipping commences about the 1st of July. The ground that is in good condition, when the crop is removed by the 20th of the month, is then set in cabbages. The plants being quite old, and ten or twelve inches in height, thereby securing two crops in the season from the same land.

Some good gardeners have adopted the plan of planting two-thirds of their ground designed for melons in potatoes, omitting the rows where the vines are to grow. Before the melons require the ground, the potatoes are harvested, leaving the ground in fine condition for the coming crop.

That portion of the crop designed for winter use, is suffered to remain in the ground until fall, and is less exposed to injury from heat than when harvested sooner. In gathering, a two-horse plow is run immediately under each row, and when well done, but little labor is required to complete the work. H. P. Byram. *Louisville, Ky., Dec.*, 1848.

Progress of Agriculture in Ohio.

Perhaps there is no subject more appropriate to the opening year, than some account of the condition and progress of this earliest settlement of the now great state of Ohio.

It is not necessary to speak much of the past—the enterprise, bravery, industry, privations, and suffering, of the hardy and distinguished pioneers of the old county of Washington—are they not written in the chronicles of our common country, to be known and read by all men?

They were, many of them, fresh from the battle-fields of the revolution, and with a noble daring they sought to establish, upon these rugged hills and within these fertile valleys, the comforts and institutions of their New-England homes. The measure of their success can only be ascertained by observation of the present. Their children's children, with such others, also worthy, as have been gathered from the four quarters of the globe, are here to-day, all Ohioans—bound in sympathy and destiny to this, now perhaps, second state in the great confederacy.

There are, however, many things which we may learn from you of New-York, and the rest of the country, and hence we rejoice in the circulation of "The Cultivator," a *national periodical*.

We have in this county over seven hundred square miles of territory, occupied by nearly thirty thousand inhabitants, in the main, intelligent, moral and thrifty. The vacant lands are fast being taken up by emigrants from Eastern Ohio and Western Pennsylvania, owing to their comparatively low price. Increased attention is being devoted to the growth of wheat; to this end, the culture of clover is attracting far greater attention than formerly.

In many parts of our county, the *skinning* system has so long prevailed, as to open the eyes of our farmers to the necessity of reclaiming the pristine fertility of the generous soil. A plan, adopted successfully, is, to sow clover upon wheat, and before sowing again, permit a crop of clover to ripen and bear seed, to be turned in; and thus the land is enriched and seeded by the same process. If with this treatment, lime could also be used, of which we have great abundance, the advantage would, doubtless, be far greater.

Most of our soil retains its virgin richness, and hence we have not studied with Flemish care, the art and economy of saving and applying manures best adapted to the soil and crop; but as necessity is the great mother of invention, doubtless we shall improve in this regard.

This is not regarded as the most favorable part of Ohio for raising wheat, corn being the leading staple; yet an improved husbandry will increase our wheat crops greatly; and in this, our Scotch fellow-citizens are good examples.

You are aware that we have an Agricultural Society in successful operation, and during the past summer we organized and sustained a Horticultural Society with great interest. There is also a District Agricultural Society in the county, embracing four excellent townships. It is somewhat difficult to arouse the public attention to an adequate appreciation of the importance of these organizations. In this, New-York challenges our admiration and emulation. We are endeavoring to glean some of that knowledge, which is said to be power, from the wisdom and experience of the rest of the world. There are, however, too few copies of The Cultivator, and of our own Ohio Cultivator, circulating among us.

It is hard to convince some of our sturdy yeomanry, that these periodicals deserve as much attention as the light and fashionable literature, which, when exclusively read, unfits our sons for the plow, and our daughters for the homely comforts and duties of the farmer's fireside. Yet, on the whole, we are making some advance in knowledge, skill and enterprise; we have but little of that weak and foolish pride in this community, which regards agriculture and the mechanic arts as degrading; most of our people regard honest industry as the true source and emblem of honor. Darwin E. Gardner. *Marietta, Ohio, Nov.* 28, 1848.

Northern Corn in Mississippi.

The corn I obtained from New-York, I planted, and upon my word I do not think one ear in 25 was sound enough to gather; I cannot understand it. It matured much earlier than our Southern corn; did not grow over 6 to 8 feet high the highest, and had, I should think, generally 2 ears to a stalk. I had it planted so thick that some friends asked me if it was a variety of sugar cane. Rows were laid off 3 feet distant, as accurately as we could; 4 grains were dropped about every 18 to 24 inches, guessed at, though I dropped the most of it, myself; plowed once and hoed twice, and the only clean piece of land I have. The land was rich, well plowed, and corn covered with the hoe.

I did not pull up a stalk, nor take off a sucker; sometimes only one grain vegetated, sometimes 2, 3 and 4 did, and I might say the average was 3 stalks. I counted 8 good ears in one hill, and intending at the time to notice particularly when gathered, I would not affirm, that there were many with 8 ears, but if there had been any stalks without ears, I know I should have noticed them, especially as some one or more friends went through the patch after out of milk, noticing as to firing of the blades. I assure you, the blades began to dry up at the ends, sometimes one part of the stalk and sometimes an other—not a fired blade did I see.

I had some Northern yellow corn, which had been planted in Mississippi a few years; it was intended to have been 3 by 1, but I lost my first planting by letting the corn lie too long in strong saltpetre brine, and when planting the second time I had not enough seed to sow it in drills thick enough, and it was very badly injured by the weevil, and much never vegetated. The consequence was, I had a bad stand. Upon the top of this, a storm blew it down very badly, the stalk being very small. I did not measure the land, as the experiment was not fair. I therefore guessed at it, and think I gathered 50 bushels from each of 2 acres, whereas my crop that adjoined, no interval, produced 35. I showed this piece of corn to several, and defied them to show any difference, as to firing or less yield of ears, than in the other corn, planted 4 by 18 to 20 inches. I had manured the land, plowed with two horses, subsoiled with two, harrowed, scattered more manure and plowed it in lightly, harrowed level and marked out rows with a bull-tongue plow, dropped seed about, or over half bushel per acre, and covered with the harrow. The bull-tongue was run round when just up, scraped out with hoe, the sweep was used twice I think, and the hoe once more, but the last hoeing and sweeping was only done because it was a part of the field and the hands went through the whole. I believe that upon the same quality of land, same manuring, same corn, same season, and similar culture. that we can make as much corn in lat. 32°, as you can, or anybody else, anywhere else. I may err of course. but ridicule, nor assertion of all scratching experiments will not change me in my opinion. M. W. PHILIPS. *Edwards, Miss. Nov.* 10, 1848.

On the Culture of Sunflowers.

EDITORS CULTIVATOR—In your October number are some inquiries on the culture of sunflowers. I have formerly raised them in quantities of a few bushels, annually, though without any very accurately conducted experiments. In the choice of soil, mode of planting, (as to depth, distance, number of spires in the hill,) and cultivation, I treat them exactly as I do corn. In an ordinary soil and season, the heads will measure from six to ten inches in diameter, though sometimes they will reach fourteen.

As soon as some of the ripest heads begin to shell out, I commence gathering, by cutting off the heads short with a knife, dropping them into a basket. A few of the greenest ones must be left for a second gathering. If they are well ripened, and the weather be dry when they are gathered, they should be shelled at once. This is done by holding the head in one hand, while with a coarse curry-comb you shell them out with the other. If you attempt to thresh them with a flail, a portion of nearly every head will prove stubborn, and many of the seeds will be broken. The heads are so very fleshy, and mould so readily, that it is very difficult to dry them in the interval between gathering and shelling. After shelling, spread and dry them partially; then winnow, and then dry thoroughly.

All sorts of domestic animals are fond of them after a little use, while in a family of nut-loving children, they are scarcely less acceptable than beech and hazle nuts, especially when they are large and well-ripened. I can state nothing of their yield per acre, but should think them not inferior to corn, under similar circumstances.

After the seed is gathered, pull up the hills, let them dry a few days, until the earth will shake from the roots freely; then stack and dry for oven-wood, as the stalks are too woody and stubborn to decay readily, and plow into the soil. Plant only the single-headed variety, as it will require much more labor to shell the many-headed, while the yield of seed is no larger.

I know nothing of the best method of hulling, preparatory to bruising the kernels for oil. I would suggest, however, that the ordinary cast-iron bark mill, used by tanners, would probably hull them safely, as the seed, when thoroughly dried, shrinks greatly in the hull, and might probably open without breaking the kernel. C. E. G. *Utica, Nov.*, 1848.

NOTE.—There is one fact that I have not seen noticed. I have often found the sunflower covered quite thickly, very late in the season of vegetation, with the yellow-striped cucumber bug lodged on the lower side of the head. Whether they were seeking food, or a place of deposit for their eggs, I could not determine. I have not observed that they injure it while young.

Effect of Drainage.

I have a place on the Hudson river, through which a brook runs, which, in various ways, is the greatest ornament of the grounds. The brook takes its rise chiefly in a swamp, about three-fourths of a mile from the river, containing about one hundred and fifty acres, surrounded nearly on all sides by high hills, from springs in which, I suppose, the water in the brook is mainly supplied. At its outlet, there is a descent probably of thirty or forty feet, in a distance of ten or fifteen rods, so that the swamp can be easily drained, by cutting a deep ditch around it, and by this means bring into cultivation, as good a piece of land, as there is in the county—which at present, is worth little or nothing. I own a part of this swamp, but have been thus far deterred from taking any step to have it drained, from a fear that it might reduce the quantity of water in the brook—a result, for which any increased value of my portion of the swamp, would be no compensation. Whether such would be the result, or whether on the contrary, the quantity of water in the brook might not be increased, by confining that of the swamp to the ditch, and thus dimish the surface exposed to evaporation, is what I have no means of deciding by any experience of my own, or that of persons in my neighborhood.

The object of this communication is, to obtain such information as will guide me in this matter. HENRY SHELDON. *New-York, Nov.* 13, 1848.

[We do not think the drainage of the swamp would tend to reduce the quantity of water in the brook; on the contrary, the drains, if directed into the channel, would probably throw into it a greater quantity.—EDS.]

Deep and Subsoil Plowing.

On page 334 of the last volume of The Cultivator, I find an article on subsoil plowing, by JOHN MALLORY. I have never met with any thing that in general so completely harmonises with my own views on that subject. I think so well of the piece, that I should be glad if it could find its way into many other publications. There is no subject that could be presented to the farmer of greater importance. I speak not from theory alone, but from practice. I think the two first paragraphs of the article ought to stand as a frontispiece to every agricultural work.

Permit me to give a little of my own experience, and in that I shall be obliged to differ with Mr. Mallory as to *time*. He speaks of having subsoiled in June an ind May, and recommends spring or fall or any time in summer. Here I disagree with him, especially in regard to such land as he speaks of—*swale*. Where the climate will permit, the month of December is the proper time, or in other words before the frost sets in, and if the land is naturally inclined to be wet, the wetter when plowed the better. The plowing ought to be done with team strong enough to turn up from twelve to fourteen inches. The first grand agent is the frost, which will entirely change the character of the soil; it will become pervious to air and moisture; the subsoil will become mingled with the top-soil, and that which was barren will become fruitful.

Now we perfectly agree, that the interest of the farmer requires that the soil be made deeper. Mr. Mallory's plan is to do it in summer, with two plows, leaving the subsoil broken up, but still below the surface-soil. This may answer where the land has a larger proportion of sand or gravel; but where the subsoil is a stiff blue, or red clay—sometimes a potter's clay—impervious to water, it will be inclined to run together, not having been removed from its former position, or mixed with the top-soil; and if it was thrown up in summer, the sun's rays, on a moist, stiff subsoil, harden it, and render it unfit for the roots of plants.

Remember I am speaking of a stiff clay, or wet meadow ground. My plan is to plow late in the fall, with a large plow, when the ground is wet, twelve inches deep, and throw the subsoil on the top as much as possible. It may freeze or thaw two or three times, in the course of the winter. In the spring, that which before looked as if it was very unsuitable for the growth of plants, is now changed, crumbling all to pieces, and readily mingling with the top-soil. Here, you have new land again, and as soon as it is dry, you may prepare it for whatever crop you think proper. If your object is to improve the land, leave it for rye, in August. or wheat, in September. Be sure never to work it when very wet, in summer. Harrow in April, plow in May, harrow in June, and again before sowing. Put on eight quarts of timothy to the acre in the fall, and the same quantity of clover in the spring. Again, I say, if you want to improve the soil, have a good coat of grass to turn down the next time.

In December, 1847, I plowed about eight acres, from eleven to twelve inches deep, part of which had a dressing of sand and lime. It was planted to corn. We have just done taking it in. It made twelve barrels to the acre, which is at least a fourth more than any field in the neighborhood, worked in the common way, where the plowing is done about six inches deep.

I should be decidedly in favor of making the time of plowing late in the fall, or just before frost sets in, as this will apply to different climates, and, as I said before, the wetter the better—the work to be done at one plowing, which can only be done in this part of the country when the ground is wet. We cannot plow twelve inches at any other time, and, besides, we are opposed to plowing while the ground is wet in summer.

I was so pleased with the article before alluded to, that I could not refrain from noticing it, and if any hint has been given that will tend to illustrate the subject, I shall be gratified. WM. TODD. *Utica Mills, Frederick county, Md.*

Comparative Value of Crops.

We have received from JOHN W. PROCTOR, Esq. the report of the committee of which he was chairman, appointed by the Essex County (Mass.) Agricultural Society, to consider the "comparative value of crops as food for cattle." From the want of actual data, the remarks of the committee are given rather as suggestions, than as the embodiment of ascertained results. The subject is one of very great importance, and any observations tending to elicit facts in regard to it, must be useful.

We give the following remarks from the report in regard to the comparative value of beets and carrots. As to the production of milk from the sugar beet, we found in a trial of them, several years since, with three cows, that though the quantity of milk was as great as when the cows were fed with the same quantity of potatoes, the amount of *butter* obtained was considerably less. The beets did not impart richness to the milk:

"Carrots and beets are cultivated to some extent to help out the feed of our animals. Is there any one of our farmers who can answer with confidence, which of these is most worthy of cultivation? Satisfactory experiments to determine this would be of great value. We have used them both, to some extent, and will state such impressions as have arisen from this use. We have found the *sugar beet* one of the very best vegetables for the production of milk; far superior to the *carrot*—which is thought by some to be the very best of feed for milch cows. We have found the carrot better for fattening than for increasing the milk of animals. We speak of the sugar beet, in preference to the blood beet, because it grows more abundantly. There are other considerations to be taken into view, in determining which of these vegetables is most worthy of cultivation, as well as the effect on the animals fed by them. We have found the carrot to yield the most, and to leave the land in the best condition, especially for the succeeding crop. Almost all other crops will grow well after the carrot; few will grow well after the beet. The carrot will grow well successively, year after year; the beet will not. The carrot requires less manure than the beet. What kind of crop, therefore, it will be most judicious to plant, will depend upon the combined consideration of the quality of the article grown; the labor and expense of growing; and the contemplated future use of the land. In our remarks upon the comparative cultivation of the beet and carrot, we do not intend to speak with that confidence, which should be a rule for others; all we intend is, to induce others, if possible, to make such observations, as will relieve them from the uncertainty under which we labor."

The report gives the following judicious remarks in regard to feeding stock: "Our impressions are, that a mixture of feed is preferable to any one kind exclusively. English hay should be the basis for winter, and Indian corn or meal the first accompaniment. Vegetables may be advantageously used, when combined with Indian meal. No stock can be fed, in the most successful manner, without a fair portion of this indispensable ingredient. It is to the animal, what steam power is to the traveller, the most certain means of going ahead. But whatever may be the kind of food used for the feeding of cattle, of this we feel confident, that it should not be sparingly used. Feed full, or not at all, is our motto. It is the worst possible economy to scrimp the feed of cattle, or to attempt to impose upon them a kind of food of ordinary or mean quality. How much time is annually wasted in gathering in the coarser grasses from the meadows, and forcing them down the gullets of animals, when their knees have hardly strength sufficient to support their emaciated bodies. If such kind of feed is to be used at all, it should be chopped and mixed with something nutritive, so that the animal may strengthen and thrive thereby. He that withholds from his beasts any portion of a full and generous feed, whatever may be the use he contemplates to make of them, in the same proportion diminishes his own income."

Farming and Fishing on Long Island.

My farm lies on the east end of Long Island, in the town of Southold, Suffolk county. It consists of eighty acres, ten of which are salt meadow, the residue good tillable land. We get from 100 to 200 bushels of potatoes, or 50 bushels of corn per acre. After these crops are off, in the fall, we usually sow wheat with timothy and clover. Wheat yielded last harvest, 28 to 35 bushels per acre. We likewise raise large quantities of Russia turneps, [ruta-baga?] which are sent to the New-York market, and fetch from 25 to 50 cents per bushel. They yield from 300 to 600 bushels per acre.

Last year I had six acres in potatoes, six in corn; six in wheat, two in rye, three and a half in oats, one and a half in turneps. I raised 170 bushels of wheat; 30 of rye, 150 of oats, 300 of corn, 850 of potatoes; 300 of turneps. I cut 20 tons of upland hay, and 10 tons of salt meadow. I have kept six cows, one yoke of working oxen, eight yearlings, four calves, three horses, one yearling colt, and twelve sheep. I sold a yoke of oxen in June, for $154. I fatted one yoke o.

oxen, and one cow, five old hogs and four shoats—raised in all twenty-nine pigs.

The farm is bounded on the south by a small bay, where there is an abundance of sea-weed, fish, eels, clams, &c. There were taken in this bay, in a few days last season, nearly one hundred thousand poggies, which were sent to New-York, on the Long Island railroad, and brought over one thousand dollars. We likewise take great quantities of white fish, which we use mostly for manure. There have been taken in our harbor, in the months of May and June, over eight millions of these, in shoals of from one hundred to forty thousand at a draught. Our seines are from 150 to 250 rods long. They are drawn with horses, around a capstan. We generally spread the fish among the corn and potatoes, at the rate of ten to twelve thousand per acre. T. V. Tuthill.

Experiment with Muck.

Editors Cultivator—I have made some experiments the past season to test the value of muck as a manure, and am satisfied that four loads of muck are of as much value as three loads of barn-yard manure. I drew the muck from the swamp, as I had opportunity during the winter, and put it in large heaps in the field—two loads of muck to one of manure, and planted to corn. The yield was about 50 bushels shelled corn per acre. The soil was sandy, the subsoil in part lime rock, slate rock, and gravel. On a part of the field I put nothing but muck; there was no perceptible difference in the corn during the summer; but on husking the corn, the ears were better filled out on the part where there was nothing but muck, occasioned, no doubt, by the muck keeping the ground more moist, as the season has been *very dry*. I think that at least one-third of the crop is to be attributed to the muck. On the part of the field where I put no manure, I put about a quarter more muck than I did where I put muck and manure. In cultivating corn, I use nothing but the cultivator, and I go through the corn three times, both ways, each time pull out all the weeds from the hills. I would not thank a man to make a hill around corn for me.

Precaution.—Any one that tends a threshing machine, ought to take a fine sponge and fit it to the nose and mouth. Moisten it, and let a string pass from each side of it to the back part of the head, and tie them together. A man thus prepared can work for hours in a perfect "smudder," without experiencing those disagreeable sensations that are always felt after working in the dust, without such precaution. I have been in the habit of thus using a sponge for the last twelve months, when I tend threshing machine. I would rather give one dollar per day, than tend a machine without it. I first got the idea from the Cultivator. Henry Keeler. *So. Salem, N. Y., Dec.*, 1848.

On the Culture of the Potato.

Eds. Cultivator—It has long been a prevalent opinion with our farmers, that seed potatoes should be selected from the largest and best. But a gentleman of my acquaintance, the owner of a large farm in the county of Worcester, in the spring of 1847, found his stock of large potatoes completely exhausted, and from the general scarcity, could not renew his supply. He then determined, from necessity, to plant his fields with small ones, varying in size from a marble to a small pullet's egg, placing two or three, without cutting, in each hill. The result was an unusually fine crop, in size, quantity and quality.

In the spring of 1848, he repeated the experiment, so far as to plant alternate rows of small ones and large ones, cut into four or five pieces. I was present when he was harvesting the crop, in the early part of October, and it was evident that the produce of the small potatoes exceeded that of the large ones. Should further experiment confirm the fact, that the small are of greater, or even of equal value for seed, it will be of some importance to farmers in this section, for the summer drouth frequently causes a withering of the potato vines by the middle of August, so that there is no subsequent growth of the roots, giving a large proportion of small ones; these have been claimed by the hogs.

Prior to the "potato rot," large quantities were imported from Maine, and the British Provinces, and with our own produce, established a price of 20*a*33 cts. per bushel. For three years past, the importations have been extremely small, and from the loss by rot, the price has been 80 cts. *a* $1.50 per bushel, an expensive article of food for hogs. M. B. *Beverly, Mass., December*, 1848.

[Our correspondent relates an experiment in raising potatoes from *sprouts*. It may not be generally known that potatoes can be readily propagated in this way, if care is taken not to mutilate the sprout in planting.]

The Mount Airy Agricultural Institute.

We make the following extracts from a letter recently received from John Wilkinson, Esq. the principal of this institution, from which it will be seen that he is going on prosperously with the good work he has undertaken: He says:

"We have now thirteen regular students, besides those from the village who attend the lectures. A more amiable, virtuous, studious and industrious class of young men never were collected—among them one sent by the Brazilian Government, a liberally educated and very intelligent and worthy gentleman, who designs to return to his own country, to found an Agricultural College there. The prospect is that we shall have as many as we can accommodate during the next summer session.

"My class all participate in every branch of farm labor, and are each required to lecture on mathematics and such of the natural sciences as they are pursuing. They are taken into the laboratory, and assist in making and repairing apparatus and preparing tests and analyses, and in short every manipulation of the scientific department. About four hours per day are spent in the practical operations of the farm; the balance in the literary department. Two or three evenings of each week are spent in the discussion of the practical subjects of the farm, in which the students all participate, and they are very interesting, as there is a great strife to excel in the discussions.

"The winter has been remarkably open; we have been plowing for the past two weeks for the spring crops. The fall has been very dry; springs and streams were never known so low at this season of the year. I have grown, this year, about 1200 bushels of Potatoes, and 800 of carrots, all sound and good."

Wild Lands of Kentucky.

In the November number of the Cultivator, is a piece by B. headed "Kentucky Wild lands" in which the advantages of purchasing and improving these lands, "rather than go on to the prairies of the wide west," are fully and justly set forth. In our section of the state, from three to four hundred miles by water, below those recommended by B. are large bodies of unimproved lands, near the Ohio and Green rivers, which can be purchased at very reduced prices, and made to yield by judicious management, large profits. The larger portion of our lands are level or undulating, and all capable of being brought into cultivation, much of it admirably adapted to meadows, and there is no crop cultivated in the west, requiring so little labour, that has, and probably will continue to yield as good a profit as hay, baled and shipped to the South. Other portions of our land, are more broken and adapted to grazing, and the cultivation of the grape. Our location is about 37½ degrees of North latitude; and the principal crops now cultivated for market, corn and tobacco. We are also so low down upon the Ohio river, as to possess great advantages, over those living on the upper Ohio, in getting our produce to market, during a low stage of water. I think our lands are peculiarly adapted to an industrious German population, possessing some means for purchasing and improving them, yet such appears to be their aversion to settling in a slave state, (if B. and many others, are correct in their belief, this cause of aversion will soon cease in Kentucky) that they buy lands in Indiana, from $6. to $10. per acre, which are not better located, and frequently of very inferior quality, to those that could be purchased on our side of the river, at from $2. to $4. per acre. There are the same advantages here, to make the timber pay for the land, as those in the upper part of the state, as mentioned by B. A tract of about 4000 acres of land, fronting nearly two miles on Green river, about two miles above Lock and Dam No. 1 where a grist and two saw mills are located, 10 miles above the mouth of the river, and 15 or 20 miles above Evansville, a very flourishing town in Indiana, rapidly increasing in population and located at the termination of the Erie and Wabash canal, upon the Ohio river, can now be purchased, if taken altogether, at $2 per acre; the tract is unbroken and can all be improved and cultivated. Many other tracts can be bought on as favorable terms. There is a vast field of coals under all this region of country, which is seen near the surface in many points among the hills on Green river and other parts of the country, and which, I should think, is worth the attention of capitalists. A. *Henderson*, *Ky*. *Dec*. 1848.

To Build a Rat-proof Granary.

Eds. Cultivator.—Having noticed in one of the nos. of your Cultivator, an inquiry for a "Rat-proof Granary," I offer the following cheap, simple and effectual plan, which you can place before your readers, though I fear I am too late to benefit my Brother Farmer who applied to you; but he is not the only one who is intruded upon by these unwelcome visitors, therefore I feel myself called upon to save all the corn I can, for those who have to build cribs:—Take locust posts and place them in the ground as deep as you may wish; saw the tops off smooth, and build on your crib, 3 or 3½ feet above the ground; and then around the posts, which must be barked smooth, nail tin; and when the rats climb up to it they will tumble down, finding no foot hold. The building must not be attached to any other building, or to any fence. A Young Farmer. *Willow Bottom*, *Md*., *Dec*. 2, 1848.

Benefit of Example.

Being among the number "who have gone to farming from the shop, store, offices, &c.," I have been much interested in the details of farming by experienced and successful farmers, that have appeared in the last volume of the "Cultivator,"—those relative to the author's own operations, and the editorial descriptions of farms and farming by men in various parts of the country. Very few of us are at leisure to visit the different farms at the season of active operations, and must, but for those descriptions, be satisfied with such examples as appear around us, many of which are certainly not the most perfect patterns of good farming. I think we are most apt to adopt the example that meets us at the moment when we wish to put it in practice, if it is not palpably wrong—not recalling, in the hurry of business, the many better ones that we have met with before. Here is one of the advantages of the "Cultivator,"—a text book always at hand; and any one may *take* time to look at the index and find each article that has a bearing upon the business he is engaged in, from which, together with his neighbor's operations, he may select the best way. Theory won't answer then; it is practical details and results that tell. Theory is let alone to talk about at leisure.

The influence of one *good* farmer among his immediate neighbors, is greater than is generally supposed. I am led to think so from what came under my observation when a boy. My father, (whom I always set down as a good farmer,) purchased a farm in a neighborhood where the farms had descended from father to son, and the modus operandi was among the "appurtenances" bequeathed. Each innovation of my father on old customs, was hailed with a sneer and a —"guess he will get sick of *that*." The muck was "cold stuff," the ashes would "kill the corn," the plaster "ruin the land," the cultivator was "not half so good as the plow," the spring-tooth rake "spoiled the hay, and would be torn all to pieces before haying was over." When asked to take an agricultural paper, the reply was,—"We know more farming than we can do now." But they were men who looked to the interest of their pockets, and could not fail to see that my father's crops were ahead of theirs, with less advantages for manure, and that he was ahead of them in his work with less help. The consequence was, one after another might be seen starting the team for the muck-swamp, but stealthily, as a dog bent on mischief. The cultivator, the horse rake, &c., were purchased and brought home in the night, at first, that the neighbors might not see them. One or more agricultural papers are now taken in each family. They have found that although they knew before, "more farming than they could do," much of it may be unlearned, and what *needs* to be done, may be done quicker and better by adopting the improvements of the day.

I left home while young, and have not my father's example fresh before me; and, as I before said, examples of good farming are not as frequent as they might be; I, therefore, on receipt of my "Cultivator," seek first and most anxiously for such examples from you and your able correspondents. I trust the interests of farmers, young in experience, like myself, will not be forgotten in the forthcoming volume. O. W. Edson. *Chester*, *Vt*., *Dec*. 8, 1848.

Judicious Improvement.

The Report of the Committee on Farms for the Hartford County (Ct.) Ag. Society, 1848, gives the following sketch of the farm of Marvin Sexton, of Simsbury, to which the first premium of the Society was awarded. "Mr. Sexton purchased this ground about fifteen years since, principally on a credit, and with a large debt upon him, which he has gradually liquidated. He has with good judgment and untiring industry, accomplished in the way of improvements what is truly wonderful, and indeed, had not some of our committee well known the facts, what would be incredible. When Mr. Sexton went on to this land, several of the lots were so covered with stone that it was exceedingly difficult to cultivate them; other portions were swampy, covered with bushes and bogs The stones have been drawn off and made into substantial wall around lots of various sizes, from four to ten acres—the swamps thoroughly drained with deep ditches, the bushes cut, the bogs cut up, piled and burned; in short, much of the land had been reclaimed and improved in a manner that would lead one to suspect that the owner must have had bank stock to have drawn upon to pay his workmen. We found his barns well filled with good hay, and his teams and young cattle in good condition. Mr. Sexton has built 533 rods of wall, and put in new posts and rails for 100 rods more. He has also made over 100 rods new rail fence, besides rebuilding 220 rods worm fence. The fences, and indeed most of the other improvements, have been made within the last five years."

Domestic Economy, Recipes, &c.

Cookery—Boiled Meats, &c.

We should be greatly obliged if some of our Farmers' Wives or Daughters, would supply us with matter for this department of our paper. For want of something from them, we copy the following, from Miss Beecher's excellent "Domestic Receipt Book:"

To Boil a Turkey.—Make a stuffing for the craw, of chopped bread and butter, cream, oysters, and the yolks of eggs. Sew it in, and dredge flour over the turkey, and put it to boil in cold water, with a spoonful of salt in it, and enough water to cover it well. Let it simmer for two hours and a half, or if small, less time. Skim it while boiling. It looks nicer if wrapped in a cloth dredged with flour.

Serve it with drawn butter, in which are put some oysters.

To Boil Corned Beef.—Put the Beef in water enough to cover it, and let it heat slowly, and boil slowly, and be careful to take off the grease. Many think it much improved by boiling potatoes, turnips, and cabbage with it. In this case the vegetables must be peeled, and *all* the grease carefully skimmed as fast as it rises. Allow about twenty minutes of boiling for each pound of meat.

To cook a Ham (very fine.)—Boil a common-sized ham four or five hours, then skin the whole and fit it for the table; then set it in an oven for half an hour, then cover it thickly with pounded rusk or bread crumbs, and set it back for half an hour.

Boiled ham is always improved by setting it into an oven for near an hour, till much of the fat fries out, and this also makes it more tender. Save the fat for frying meat.

Bologna Sausages.—Take equal portions of veal, pork, and ham, chop them fine, season with sweet herbs and pepper, put them in cases, boil them till tender, and then dry them.

Eastern Brown Bread.—One quart of rye.

Two quarts of Indian meal: if fresh and sweet, do not scald it; if not, scald it.

Half a tea-cup of molasses.

Two teaspoonfuls of salt.

One teaspoonful of saleratus.

A tea-cup of home-brewed yeast, or half as much distillery yeast.

Make it as stiff as can be stirred with a spoon with warm water. Let it rise from night till morning. Then put it in a large deep pan, and smooth the top with the hand dipped in cold water, and let it stand a while. Bake five or six hours. If put in late in the day, let it remain all night in the oven.

Baked Beans.—Pick over the beans the night before, and put them in warm water to soak, where they will be kept warm all night. Next morning pour off the water, and pour on boiling water, and let them stand and simmer till the beans are soft, and putting in with them a nice piece of pork, the skin gashed. Put them into the deep dish in which they are to bake, having water just enough to cover them. Bury the pork in the middle, so that the top will be even with the surface. All the garden beans are better for baking than the common field bean. They must bake in a moderately hot oven from two to three hours.

The best variety for baking is the small white Lima; next to this, the white Cranberry bean.

New-York State Agricultural Society.

Annual Meeting at the Capitol, on the 3rd Wednesday, (17th) January, 1849.

The following committees appointed for the January meeting:

Management of Farms—Hon. A. Van Bergen, Coxsackie; Hon. Wm. Buel, Rochester; Hon. J. S. Gould, Hudson.

Experiments and Essays—Asa Fitch, M. D., Salem; Hon. Geo. Geddes, Onondaga; Hon. S. Cheever, Saratoga.

Cheese and Butter Dairies—B. P. Johnson, Albany; Hon. H. C. Tuthill, Cayuga; A. Doubleday, M. D., Binghamton.

Butter and Cheese—Joseph Alleyn, Rochester; Amos Briggs, Schaghticoke, and Joseph Cary, Albany.

Draining—John Delafield, Oaklands; Roswell Reed, Coxsackie; B. B. Kirtland, Greenbush.

Wool and Wool Depots—Hon. J. P. Beekman Kinderhook; S. N. Dexter, Whitesboro; Hon. D. S Curtis, Canaan. .

Fruit—E. Emmons, Albany; D. Thomas, Greatfield; H. Wendell, Albany; J. W. Bissell, Rochester; C. S. Wilson, Utica.

For the best new seedling variety of winter apples, of decidedly superior quality and valuable for exportation; one dozen specimens to be exhibited; together with a history of its origin; a description of the growth, character and habits of the tree, and the growing of the fruit—such fruit to be adjudged by the committee as of the first character for orchard purposes, diploma and $10. For the second best do., $5.

The above new seedling variety to be sent to B. P. Johnson, Secretary, Agricultural Rooms, Albany, before the 15th of January, 1849, for examination.

Wheat and Indian Corn—Charles Lee, Penn-Yan; Hon. Tracy Pardee, Batavia; Hon. John I. Brinkerhoff, Cayuga.

Barley, Rye, Oats, Peas and Beans—Hon. O. Hungerford, Watertown; J. W. Ball, Exeter; W. A. McCulloch, Greenbush.

Potatoes and Root Crops—A. Osborn, Watervliet; Robert Harper, Albany; J. W. Haydock, Greenbush.

Corn Fodder, Hops, Clover and Timothy Seed—Col. E. Kirby, Brownville; Hon. Benj. Enos, DeRuyter; Hon. Henry Wager, Oneida.

Arrangements for Pomological Exhibition—H. Wendell, M. D., J. McD. McIntyre, and Jas. Wilson, Albany.

Arrangements for Weekly Meetings during the Winter—Sanford Howard, J. McD. McIntyre and B. P. Johnson, Albany.

Prof. E. Emmons, M. D., is expected to deliver an address on the first evening of the annual meeting. Notice will be given of the subject of the address.

B. P. Johnson, Sec'y.

Agricultural Rooms, Dec. 14, 1848.

Ardent Spirit from Milk.—In Tartary, the milk of the mare is converted into a liquor called *koumiss*, which is said to be agreeable to the taste. From this liquor a spirit is obtained by distillation, called *rack* or *racky*.

Notes for the Month.

To our Patrons and Friends.

With "the compliments of the season" to all our friends, from the "frozen north" to the "sunny south," we have the pleasure of presenting them with the initial number of our new volume,—a number which we intend shall be at least equalled by all the future nos. of the volume, which it is our intention to make, in every respect, superior to any we have heretofore issued; and which we doubt not, will meet the full anticipations of all who shall favor us with their subscriptions. We commence the year, with new and beautiful type, and with an increased number, and a better style of engravings; and our engraver, Mr. Forbes, promises us that the engravings for the next year shall not be excelled by those of any periodical in the country. Its table of contents we think also unusually rich and varied, and admirably adapted to interest, to instruct, and to elevate the character of our rural population; and, take it all in all,—the quality of the paper,—the beauty of its mechanical execution,—the style and number of its illustrations, and the quality and quantity of the reading furnished, it is believed that it will be found such as to deserve a hearty welcome from all its readers, and worthy a place in every farmer's family. We therefore bespeak for it the kind offices of all our friends. It will be remembered that all subscriptions are discontinued at the end of each year, and that we are dependant upon the voluntary efforts of those who so kindly act as agents, for their renewal. Having suffered severely by the late fire, by which our office was destroyed, we shall be particularly grateful for any extra efforts which our friends may be able to make to give The Cultivator an increased circulation the present year.

Communications have been received, since our last, from T. V. Tuthill, Henry Keeler, H. P. Byram, A., F. Holbrook, H., Agricola, A Farmer's Wife, Wm. Todd, H. C. W., Darwin E. Gardner, M. W. H., M. B., P. Dubois, A Subscriber, A Young Farmer, O. W. Edson, H. S., S. B. Buckley, A Plain Farmer, J. R., B., W. Halsey.

☞ We received, too late for this month, a very interesting communication from our friend T. Hart Hyatt, Esq., United States Consul at Tangiers, on the mate, soil, productions, &c., of the empire of Morocco, which we shall publish next month.

Books, Pamphlets, &c., have been received, since our last, as follows: Analysis of the Cotton Plant and Seed, with Suggestions as to Manures, &c. By Thomas J. Summer. From Col. A. G. Summer.—Scientific Agriculture, or the Elements of Chemistry, Geology, Botany and Meteorology, applied to Practical Agriculture. By M. M. Rodgers, M. D. Rochester: E. Darrow. From the Publisher.—Transactions Penn. Hort. Society.—Catalogue of the Officers and Students of Yale College, from Prof. Norton.

Plants and Fruit Trees.—We failed to acknowledge, as we should have done, in our last no., a box of flowering plants, for our garden, from our friend David Thomas, Greatfield; and also a package of fruit trees of new and rare kinds, from Messrs. Elwanger & Barry, Mount Hope Nurseries, Rochester. They will please accept our thanks.

☞ We will endeavor to make room soon, for the papers enclosed to us by our friend J. P.

E. C. J.—Answers to your inquiries next month.

New Correspondents.—We are happy in having it in our power, to give the very excellent papers of Agricola, H. C. W., and A Farmer's Wife, in this number. We hope they will favor us with frequent contributions to our pages. Agricola we know *practices* what he teaches—H. C. W. though unknown to us, must, we are confident, be a good farmer; as to A Farmer's Wife, who furnishes us with one of the best plans we have met with, for a "working-woman's cottage,"—she undoubtedly has "a local habitation and a name," with which we should be happy to be made acquainted.

☞ The attention of all who are disposed to aid in procuring subscribers to "The Cultivator," is invited to the List of Premiums, given on last page. We hope there will be a spirited competition.

School of Applied Chemistry in Yale College.—We would call particular attention to the advertisement of this school, which will be found in the present number. This department has been in operation more than a year, and its success has been greater, in all respects than its most sanguine friends anticipated. In regard to the course of instruction and the general management of the school, we have heard but one expression, and that of entire approbation. It is unnecessary for us to speak of the talents of Professor Norton, or his acquaintance with the scientific principles of agriculture; his character in these respects is already well known, and the valuable productions of his pen are familiar to many of our readers.

Tile Machine.—We are informed that John Delafield, Esq., Oaklands Farm, near Geneva, expects soon to receive from England, one of the most approved tile machines, which will make from 8,000 to 10,000 draining tiles per day.

☞ A pair of remarkably large yearling steers, twins, raised by Mr. Hiram Ackley, of Hamilton, Madison county, lately passed through this city, having been purchased by Mr. F. A. Wier, of Walpole, N. H. They were calved 24th of March, 1847. We did not learn their weight, but we think they are as large as any we have ever seen of their age. They appear to be a cross of the Durham and common stock, are thrifty, and not large-boned for their size.

De Ruyter Institute.—We are informed that an agricultural department has been added to this institution. It is under the charge of Mr. Gurdon Evans, Professor of Natural Sciences,—a gentlemen who qualified himself for this station, under the instruction of Prof. Norton. It is intended to afford farmers the opportunity of obtaining a thorough knowledge of those sciences connected with agriculture. The course for farmers commenced on the 13th of December, and will continue fourteen weeks. Each student spends two hours in each day in the chemical laboratory, where they are instructed in the modes of analysing soils, ashes, &c. A course of thirty lectures is to be given during the term, upon the relation of geology to agriculture, to include remarks on the rotation of crops, manures, draining lands, &c. To students who wish become thorough *agricultural chemists*, a complete course will be given, "beginning with a course of qualitative examinations, followed by a series of qualitative analyses of soils, ashes, minerals, mineral waters, gases, chemical substances," &c. Medical students who wish to acquire a practical knowledge of pharmacy, either before or after attending lectures, will be furnished the facilities for prosecuting the investigation of medical substances, both analytically and synthetically, and at the same time they may pursue their studies under able practitioners in the neighborhood. From what we have learned of this institution, we are favorably impressed with its character, and the advantages it affords for giving instruction in the branches above mentioned.

Potato Rot.—Mr. P. Dubois, of Tompkins county, writes us that he applied a dressing of lime to a part of his garden, and that potatoes planted on this part have not rotted, while those on adjoining land, not limed, have decayed very much. He thinks it was the lime which prevented the attack of the disease; but we have heard of similar trials in many instances in which no such effect was discernable.

Heavy oats.—At the late show at Saint Johns, New Brunswick, three samples of oats which were exhibited, weighed respectively 47 lbs., 46½ lbs. and 44 lbs. the bushel.

Sullivan County Agricultural Society.—The officers of this society for 1849, are Lotan Smith, President; C. S. Woodward, J. C. Curtis, J. M. Foster, L. Moore, G. G. DeWitt, J. C. Voorhes, D. Pierce, Seth Brown, A. Norris, H. Mead, Platt Pelton, Vice-Presidents; John P. Jones, Cor. Secretary; Jas. H. Foster, Rec. Secretary; M. L. Bushnell, Treasurer.

Sympathy between a Horse and Sheep.—Many persons have doubtless seen a portrait of the celebrated race-horse Dungannon, accompanied by the figure of a sheep, the latter having on its side the initials, D. O'K. The following is the explanation of the picture: A drover being on his way with a flock of sheep for market, one of them became lame and unable to travel. The animal was put into a field where the horse above-mentioned was feeding. The sheep recovered, and a singular attachment soon took place between it and the horse. It is stated that such was the affection of Dungannon for the sheep, that, besides sporting with it in various ways, he would sometimes lift it in his teeth, with great tenderness, into the rick, where the groom deposited the fodder. The horse would, also, on all occasions, defend his new friend, and suffered no one to offer him the least molestation. Mr. O'Kelly, the owner of the horse, being made acquainted with these circumstances, bought the sheep of the farmer, marked the wool with his own initials, D. O'K., and left the two friends in peaceable possession of the enclosure.

Cattle in the South.—Dr. Lee says, writing from Augusta, Ga., "common cows nowhere give more than from one to two quarts of milk at a milking. At present (10th June,) cattle are poor, and many have not shed their coats. Indeed, not one animal in a hundred has enough to eat. Short commons have dwarfed them down to about one-third the size of northern cattle."

Climate on Corn.—Isaac Flower, of Erie county, Ohio, speaking of the gradual change in varieties of northern corn when removed south, says, "From sixteen years acquaintance and cultivation, I am prepared to say that the white flint variety seems to bear no similarity to what it was sixteen years ago; it was then an eight-rowed flint corn; it is now some sixteen to twenty rows gourd-seed."

Corn—Thick and Thin Planting.—We have long been satisfied that the more evenly the crop is distributed over the ground, the greater the product. One of the heaviest crops ever raised, consisted of a single stalk to every square foot. Hence drills are better than hills, both being equally well managed—and small and frequent hills, better than large remote ones. S. H. Reed of Bergen, Genesee Co. planted an acre with hills, 3 feet 4 inches by a foot and a half. Another acre was planted 3 feet by 3 feet 4 inches—4 stalks to a hill in both cases. Both were hoed twice, and dressed with the cultivator four times. The product of the close acre was 90 bushels of shelled corn; the other, only 45 bushels. In many instances which have come under our observation, corn planted in drills has usually yielded one half more than in hills, both receiving judicious and equally good treatment.

Deep and Shallow Planting.—C. L. Shepherd, of Illinois, planted his corn-field shallow, or about an inch deep, except eight rows through the middle, which was planted two or three inches deep. The shallow corn came up first, and kept the lead during the whole season. The difference was discernable as far as the corn could be seen.

Parsnips for Hogs.—Parsnips appear to be nearly the only root, good for swine in an uncooked state. Turn a herd of swine into a field containing field beets, ruta bagas, carrots, and parsnips, and the question will very soon be settled which they like best and which consequently is best for them, the parsnips being wholly devoured before the others are touched.

Chestnuts have been planted near Chicago, according to the Prairie Farmer, and grown from seed in eight years, from 15 to 20 feet high, and already bearing considerable crops.

Good Rule.—The Editor of the *Prairie Farmer,* says he was taught when a boy to refrain from grumbling at two things. The one, is that which he cannot help—and the other, that which he can help.

Salt for Cattle.—A correspondent of the Louisville Journal thinks salt of little use for cattle. He has conversed with stock raisers, and none have furnished him proof that it is of value. He salted a part of his stock regularly once a week, and withheld it for months from another portion, and was unable to discover any difference.

Improvement.—The editor of the Genesee Farmer says he has seen a girl in a cotton mill, tend six power looms. weaving 1260 yards in a week, for which she was paid *five dollars.* In India, where labor-saving machinery is not introduced, a woman must labor 20 weeks to produce an equal amount of goods, and will receive 4 cents a day, or 24 a week, for her services.

Inconsistency.—Dr. Lee asks the following very pointed question, which contains matter for a great deal of reflection for those who will reflect at all.— 'When will the cultivators of American soil instruct their representatives in Congress to vote one dollar to teach the arts of peace and the science of agriculture to the young men of the republic, where they now vote *thousands* to instruct them in the art of shedding human blood by violence, or the science of war."

Elder Bushes.—The *Ohio Cultivator* says that the best way to exterminate elder bushes and briars, is to mow them closely to the ground two or three times during the summer; the roots will mostly die after the second year's practice of this remedy." Nurserymen who have occasion to cut down near the ground, stocks which are grafted, or have been budded, have noticed that when the buds or grafts fail after the sprouts have been rubbed off, that the stocks usually dwindle, and frequently die. Cherry trees (which do not sprout readily,) are easily killed in this way; peaches, with more difficulty. No doubt a similar treatment would destroy bushes and briars on the farm.

Cheating the Worms.—S. Williams says that a farmer in Seneca county, N. Y. finding the worms destroying his newly planted crop of corn, planted again between the rows. The worms confined themselves to the first hills, and he harvested a heavy, full and even crop.

Answers to Correspondents.

Peat Ashes.—In reply to our correspondent at Smithfield, Va., in regard to the effects of peat or turf ashes, we observe, that such ashes generally prove useful for most crops. The peat is preferred by some in a charred state—or not entirely burnt to ashes. A writer in the Scottish Quarterly Journal of Agriculture, describes the effect of a mixture of charred peat and peat ashes. A fire was first kindled, and the peat piled around. The fire was kept in a smothered state in order to char the peat, but it sometimes broke out for a while, and made ashes. When the burning was stopped, the mass was about half charred peat and half ashes. The mixture was used as a dressing for ruta baga, at the rate of 200 bushels per acre, put into the drills. It was tried against good stable manure, that would cut like mould with the spade, which was applied at the rate of twenty tons to the acre, and put into the drills like the peat and ashes. Both lots were treated alike. The peaty mixture produced *forty* tons, and the stable manure *thirty* tons, per acre.

The peat and ashes, and the stable manure were also tried for peas, in a manner similar to that described as for turneps, and the rows where the peaty mixture was used, yielded as much as those treated with manure.

Mr. Crispell's Farming.—"A Subscriber," Frederick, Md. The statement to which you refer was an extract from Mr. Crispell's account of his farm products, as given in the Transactions of the New-York State Ag. Society. The quantity of ground occupied by each crop, we do not find mentioned, but the following is given as the product per acre: viz., corn 70 bushels; oats, 71½; rye, 27; wheat, 12; potatoes, 120; hay, 2¼ tons. We will endeavor to obtain from Mr. C. the information desired, in regard to the amount of grain and provender consumed on the farm by stock.

Cistern.—H. S., Middlebury, Vt. The plan you propose, of drawing off the sediment, or impure water, from the bottom of the cistern, by means of a pipe and faucett, is new to us, but it looks as if it might answer the purpose. At any rate it will not cost much to try it—the experiment will be useful, from having ascertained *a fact.*

Spaying Cows.—J. R., Utica, N. Y. We have no practical knowledge in regard to this matter. It is quite common in England and in some parts of this country, to spay *heifers* in order to hasten their fattening. We have heard of a few instances in which the operation has been performed on milch cows. The object in this case is to have them continue in milk, indefinitely, as to time. If any one can furnish any information on the subject, either as to the mode of performing the operation, or its particular advantage, in regard to *cows,* we should be glad to receive it.

Trench Plow.—W. H., Trumansburg, N. Y. We do not know where this implement can be had. Since subsoil plows were introduced, trench plows have mostly gone out of use. They were usually made very strong, and without a mould board. Any plow that is strong and large may be made to answer the purpose of a trench plow by running it deep enough.

Mares for Breeding.—A late English essay on the breeding and management of farm-horses, recommends that mares for breeding should be well-shaped in their different parts; gentle, but spirited; have a large, well-formed carcase; good middle; strong, sinewy limbs; not too high, (say 15½ hands;) broad, well-formed chest, which is of the greatest importance; neck not too long, but well set on; ears erect; free from natural blemishes of any kind; one color is to be preferred, with good action in all paces; head well elevated, which generally indicates spirit; and not too much hair on the legs. The proper age for breeding is neither too young nor too old—(say from five to fifteen,) which will impart vigor to the offspring.

Use of Roses.—A correspondent of a western paper, asks whether mankind would be most benefitted by an acre of roses or an acre of potatoes?

To which the editor replies by asking another question,—which is the most useful, the plow, or the razor?

Prices of Agricultural Products.

New-York, December 14, 1848.

FLOUR—Genesee, per bbl., $5.50a$5 62½—Fancy brands $5 75 a$6.25.

GRAIN—Wheat, Genesee, per bush. $1.20—Corn 58a62c—Rye 62 c.—Barley, 64a65c.—Oats, 32a36c

BUTTER—Best, per lb, 19a21c.—Western dairy, 15a18c.

CHEESE—per lb., 6½a7½c.

BEEF—Mess, per bbl., $9 75 a $11—Prime, $5.75a$6.

PORK—Mess, per bbl., $12.50a$12.62—Prime, $8 37½—Dressed Hogs, per lb., 6¼a6¾cts.

LARD—per lb., 7½ c

HAMS—Smoked, per lb, 6½a9c.

HEMP—American dew-rotted, per ton, $155a$160.

TOBACCO—per lb., Kentucky, 3½a6c.

COTTON—Upland and Florida, per lb., 5½a6¼—New Orleans and Alabama, 5⅝a7½c.

WOOL—Prime or Saxon fleeces, washed, per lb.,....... 35a41c.
American full-blood fleeces,.................. 31a33
" half-blood,.......................... 26a27
" one-fourth blood and common,........ 23a25

☞ The news by the last steamer had the effect to check operations in flour and corn The demand for flour is chiefly for the Eastern trade, for which there is moderate inquiry.

Annual Meeting N. Y. S. Ag. Society.

THE Annual Meeting of the N. Y. S. A. Society, will be held at Albany on the 3d Wednesday, (17th) of January, 1849.

Premiums will be awarded on Grain and Root crops, Butter, Cheese, Fruits, &c. Statements should be furnished the Secretary early in January. It is desired that there should be a full representation from the county Societies, as well as of the friends of Agriculture generally.

A *Pomological Exhibition* will be held at the rooms of the Society, and growers of fruit are respectfully requested to forward specimens to the Secretary, as early, if practicable, as the 15th of January.

B. P. JOHNSON,
Secretary.

Nov. 1, 1848—2t.

Mobile Seed Store.

Agricultural and Horticultural Manufacturers' Agents, for the sale of Plows, Straw Cutters, Corn Shellers, Harrows, Cultivators, Seed Planters, Water Rams, &c., &c.

THE undersigned have been for many years devoted to the advancement of Agricultural, Horticultural, and other scientific pursuits, for which a taste is advancing in this State rapidly, and beyond any other period of its existence; and aware of the want of an Agent located in Mobile, in whose judgment in such affairs the citizens of this and the adjoining State and the proprietors can have confidence, and who would take a direct and personal interest in furthering the introduction of approved *Agricultural* and *Horticultural* implements, tools and machinery, we are induced to open an Agency in this city, devoted to these branches alone. From our knowledge of, and acquaintance with the *Planters of Alabama and Mississippi*, we are enabled to offer greater inducements and facilities to Patentees and inventors for the sale of their articles, than can be obtained elsewhere. We will open an exclusive

AGRICULTURAL AGENCY WAREHOUSE IN MOBILE,
SUITED TO THE SOUTHERN PLANTER.

Inventors and Patentees are invited to a correspondence (post paid,) relating to Plows, Harrows, Rollers, Cultivators; Horse Powers, Grain and Rice Threshers, Hulling Machines, Fanning Mills, Cotton Gins, and all other articles useful to Planters and Agriculturists.

We will act as Agents for responsible Nurserymen and Horticulturists, on reasonable terms, and will give prompt attention to the receiving and forwarding goods to the interior of the State free of charge.

We will make prompt returns of all business confided to us.

☞ Agricultural Works received on commission.

Mobile, Sept. 1848. S. B. NORTH & CO.

Refer to:—Hon. John Gayle, Member of Congress; Messrs. Stewart & Eaton, Esqs.; Campbell & Chandler, Esqs.; J. G. Lyon, Esq., U. S. Marshal; Messrs. LeBaron & Son; J. C. Hodges, Esq.; Collier H. Minge, Esq.; Messrs. L. Merchant & Co.; J. H. Rivers & Co.; Robert Desha & Co.; David Stodder, Esq.; Luther Tucker, Esq., publisher "Cultivator" and "Horticulturist," Albany; A. B. Allen, Esq., Editor "American Agriculturist," New-York; Wm H. Starr, Esq., Editor "Farmer and Mechanic," New York.

Nov. 1.—3teom.

American Institute

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A Catalogue of the above Implements, Seeds, &c., of 100 pages, handsomely illustrated with plates, will be forwarded by mail, when requested, post paid.

Subscriptions to the AMERICAN AGRICULTURIST received. Price $1 per year, for 12 numbers, of 32 pages each, royal octavo, numerously illustrated and descriptive of the latest improvements on all subjects connected with agriculture. Seven volumes now printed, and handsomely bound, at $1.25 each. Jan. 1, 1849—1t

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THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THIS work is published by the proprietor of "The Cultivator," at his office in Albany, to whom all orders should be sent. Two volumes are completed, and the third is now in course of publication. The numbers are issued promptly on the first of the month, each containing 48 pages, and embellished with an engraved frontispiece, and illustrated with numerous engravings of Rural Cottages and Villas, Farm-Houses, Gates, Lodges, Ice-Houses, Vineries, Fruits, Flowering Shrubs and Plants, &c., &c.

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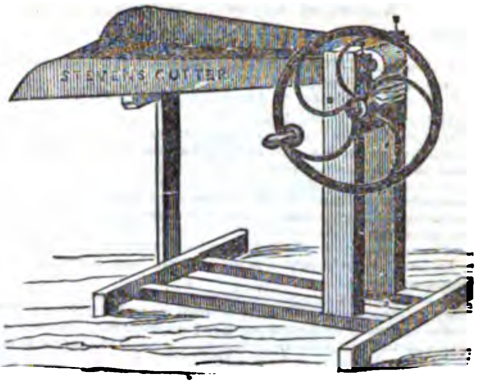
☞ Subscribers may commence with the volume in July, or with the January number. The back Vols. and back Nos. can be furnished.

Agents for "THE CULTIVATOR," will do us a favor by acting also as Agents for "THE HORTICULTURIST," a work designed to promote rural taste and rural art, not only in the orchard and the garden, but in all that gives character and pleasure to a country residence.
LUTHER TUCKER.

Albany, January, 1849.



Stevens' Spiral Hay and Straw Cutters.

THE subscriber wishes to call the attention of the public to the following extract from the report upon Hay cutters, of the committee on New Inventions, Machinery, Optical and Philosophical Apparatus, Edge Tools, &c. &c. of the Worcester County Mechanics' Association, at their first exhibition at Worcester, Mass., Sept. 26th, 27th, 28th, 29th, 30th, 1848. This committee was composed of five residents of Worcester county, each and every one being *practical mechanics*, inventors and manufacturers of machinery of the highest character, and known as such throughout the country—and all personally acquainted with the several makers of Cylinder Hay Cutters, as also the several kinds of machines made by them.

They say ☞ "That all articles reported upon by them have undergone full scrutiny, and in every case where practicable, have subjected the claims of merit to severe tests." ☜

"Instructions having been received by the committee. authorising them to act upon any subject involving questions of mechanical merit—such action not to interfere with the awards of other committees." Upon an application being made to them for a mechanical analysis of the action of spiral and straight lines as cutting edges on the surfaces of cylinders, the "committee deemed it a proper subject for their action,"—and in their report they say:—

"A true radial spiral, of whatever pitch or angle, has its plane at all times perpendicular to the axis around which it winds; and at all points where it comes in contact with a cylindrical surface of whatever diameter, it will point directly to, and the pressure will be in perpendicular lines to the cylinder's axis. If then any object passes between the points of contact, it will be severed by direct pressure—and such is the action of spiral blades or knives now under consideration.

"When straight lines are carried diagonally across the surface of a cylinder in the form of a cutting edge, (or any other) the plane of the edge can at no time or place form a radial or perpendicular line with the axis; and consequently the pressure at the points of contact is not in a line with the centre of the axis and plane of the edge, but either in advance or rear of both cylinders; and such is the arrangement of the cylinder, with straight knives or blades now under consideration."

"First. The strain upon the edge of the knife is oblique to its rotating action—the most dangerous that it can possibly sustain—being precisely that of a pair of shears with a loose joint."

"Second. A loss of power; for whatever angle the plane of the cutting edge makes with the perpendicular of the cylinder's axis, the measurement of the base of such angle must be deducted from the leverage working the cylinders."

"We therefore *unanimously* consider that the *Radial Spiral* knives require less power and are *less subject to breakage*, and also, much *less difficult to keep in repair* than the straight diagonal knives, which last are, in the opinion of the committee, at ☞ *Variance with all true mechanical economy.*" ☜

STEVENS' SPIRAL HAY CUTTER being constructed precisely upon the above principles, and at the same time the most simple of all spiral cutters in use, and as simple as any kind with straight diagonal knives—and having a *newly invented and patented substance superior to dry hide* for the roller, upon which the knives act, it is in all respects as good, if not the best machine, for the purpose, in use—and at the same time, the prices of machines of equal size, average considerably lower than any other kind, with either spiral or straight knives.

They are kept constantly on hand, at wholesale and retail, at manufacturer's prices—and all warranted—at the Albany Agricultural Warehouse, by H. L. EMERY.

N. B. If reports of committees are to be considered, and the public to be guided thereby, it is of the utmost importance that proper persons are selected as judges. Such as have both practical talent, and time to bestow in making their examinations; and at the same time such men as are known and have the confidence of the public. But such is the hurry, bustle, little time appropriated, and most frequently the poor selection of judges, that the reports at our State and County Fairs, exert comparatively a small influence for improvement, particularly on agricultural machinery, to what is in their power, under a more practical and efficient organization of their committees. Jan. 1—1t.

School of Applied Chemistry,

Attached to the "Department of Philosophy and the Arts," in Yale College.

B. Silliman, Jr., Professor of Chemistry and the kindred Sciences applied to the Arts.

J. P. Norton, Professor of Agricultural Chemistry.

THE Instructors in this department have opened a commodious laboratory on the College grounds, where they are now prepared to receive pupils in special and general chemistry. The system pursued with those who design to become chemists or to study the science extensively, is thorough and complete. Such studies always commence with an extended course of qualitative examination of unknown substances—and in due time pass through a series of varied quantitative determinations. To those who wish to follow special investigations connected either with the arts, agriculture or pure science, every facility will be afforded, both in organic and inorganic analysis.

Prof. B. Silliman, Jr., will instruct particularly in general elementary and analytical Chemistry, Mineralogy and Metallurgy, with special reference to their application to the useful arts. He will also give a course of Lectures on Mineralogy and Metallurgy, continued through the summer term. During the fall and earlier part of the winter, he will also carry a class through a course of elementary Chemistry, in elucidation of the regular course on this subject in the Academical department.

The instruction in the professorship of Agricultural Chemistry is intended to unite, as much as possible, practical views with theory; to give the untaught farmer an opportunity to become acquainted with so much of science as shall enable him to reason upon his daily pursuits, and to understand the great principles upon which good cultivation must depend, presented in so plain a form as to be within the comprehension of all. Few chemical terms will be employed in the lectures, and those only of the simple explanations; they will thus be understood by those who have never devoted any attention to the subject. A regular course of lectures will be delivered in the winter of each year, commencing in January and continuing about two months, there being four lectures in each week. The subjects of the course will be—the composition and nature of the soil, the plant, and the animal—theories of rotation of crops, and of feeding—modes of draining—the different kinds of manures—their value and how beneficial, the improvement of waste lands, &c., &c. Text-books will be indicated for study during leisure hours.

In connection with the lectures will be a short course of elementary Chemistry, for such as wish to study somewhat more of Chemistry than is given in the course, and to qualify themselves for making ordinary testings and qualitative examinations of soils, manures, &c; this course will occupy two hours of five days in each week during two months.

The fee for the Lectures on Agricultaral Chemistry will be $10. That for the Elementary Chemical Course, including apparatus and re-agents, will be $25.

Students in Analytical Chemistry are allowed to work in the laboratory during the whole day; glass will be furnished (with charges for breakage,) also the ordinary re-agents and balances for the use of those who are so far advanced as to require them. There will be frequent recitations, and the students will receive the constant attention of one or both of the professors. The fee for this class will be $20 per month.

The vacations will correspond with those in the Academical departments, viz:—six weeks from the third Wednesday of August; two weeks from the first Wednesday in January; and four weeks from the third Wednesday in April of each year. Sessions begin with the close of each vacation, and are in length respectively, 14—14 and 12 weeks.

Students in this school will enjoy all the advantages to be derived from the extended means of the institution in Libraries, Instruments and Collections. The Mineralogical and Geological collection is widely known as one of the best in the country, and there are smaller collections in the possession of the Professors. Those who desire it can have access to the Lectures on Chemistry, Mineralogy and Geology, by Prof. B. Silliman, Senior, and to the lectures on Natural Philosophy, by Prof. D. Olmstead.

Instruction is also accessible in higher Mathematics, in Engineering and the use of instruments, in Philology, History, Oriental Languages, and Belles Lettres.

The department of Philosophy and the Arts in Yale College, of which the School of Applied Chemistry is a part, has been organized with a view to meet the wants of those who desire to follow the studies embraced under it further than they are pursued in a collegiate course. Those who desire further information on this subject, are referred to the annual catalogue of the institution for 1847, '48.

A college education is not however required of those who become students under this department.

The Professors are always accessible to those who wish to consult them on matters relating to their several departments; and will undertake such analyses as may be entrusted to them. Letters of inquiry will be promptly attended to.

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THE subscriber offers for sale several very superior South down Rams and Ewes, (from lambs to 4 years old,) some of which are imported animals.

Great care has been taken, and no expense spared, to raise up this stock to a high standard He has lately added to his former stock, several fine animals, many of which were selected personally by their former owner, from some of the most noted flocks in England. Applications may be made either personally or by letter, addressed to [Oct. 4t] J McD. McINTYRE, Albany.

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THE subscriber offers for sale at his Nurseries, Plymouth. Mass, Pear, Quince, Cherry, Plum, Apple, and Dwarf Apple, (Paradise) stocks, suitable for budding next August, or for spring grafting. Also, the following ornamental tree stocks, from two to three feet high, and stout, viz: Mountain Ash, Oak, Hawthorn. Elm, Spanish Chestnut, Horse Chestnut, Birch, Beech. Ash, Norway Maple, Sweet Brier, Larch, Scotch fir, (2 ft.) Silver fir, (1ft.) Spruce fir, (1ft.) Norway fir, (1ft.) Arbor Vitæ, (15 in.)

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THE subscribers are making the largest and best stoves in market for Dairymen, Planters, and Hotel keepers—to which the attention is invited. JAGGER, TREADWELL & PERRY, Eagle Foundry, No. 110 Beaver st., Albany.

Oct. 1, 1848—4 t.

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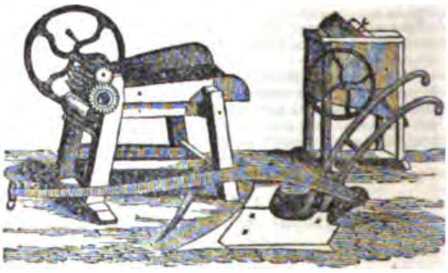
WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample. T. C. PETERS & BRO.

Buffalo, Dec 1—6t.

Grant's Patent Fan-Mills.

I. T. GRANT & CO., Junction, Rensselaer county, N. Y., continue to manufacture these celebrated mills. They have been awarded five first premiums at the New-York State Fairs and the Fairs of other States, and in no instance has any other mill of the kind received a premium over them. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the last year they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the New-York State Ag Society for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains as before. Our agents are H L. Emery, Albany; G. S. & F. A. Willis, Pittsfield, Mass; Parsons & Dickinson, Springfield, Mass.; John Mayher & Co, 195 Front Street, New York; Benj. Myers, Newark, N. J.; S & E. Hasbrook. Stone Ridge, N. Y.; James S. Browne, Newburgh. N. Y.; H. Warren, Troy; Hugh Van Alstyne, Kinderhook; S. & M. Peckham, Utica; E. Whitman, Jr., Baltimore, Md; Fitzhugh Coyle, Washington, D. C; Denison & Webster, Savannah, Geo. Address I T. GRANT & Co., Junction, P. O., Rensselaer county, N. Y., by whom all orders will receive prompt attention Sept. 1.—6t.



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New-York, Oct. 1, 1848.—tf.

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Horace Greeley, of the N. Y. Tribune.

Holden's Dollar Magazine.—The September number of this work has been received, and to simply say that it is a valuable publication, would not be doing justice to its merits. It is the best of Magazines, and must soon assume its place at the head of the literary press.—*Democrat, Bloomsbury, N. Y.*

Holden's Dollar Magazine.—The August No of this sterling journal is now upon our table. In glancing over its contents we are forcibly struck at the superior arrangement of everything appertaining to Literature and Art. The articles are all of a high order, far surpassing anything that appears in "Graham's," or "Godey's Lady's Book." The typography of the number before us, is most excellent, vieing in whiteness of paper and clearness and distinctness of type, with any similar work published in the United States.—*Republican, Jackson, Tenn.*

Holden's Dollar Magazine is the most interesting production of popular literature that we know. The price, as its name implies, is but one dollar a year, and we recommend everybody to subscribe for it.—*Advertiser, Lowell, Mass.*

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To the Families of American Farmers.

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Now what we ask of Farmers through the country is this: Let your sons make an effort among your neighbors to form a club; any young man can easily raise a list of four names without any trouble at $1 a year. If he does so he can secure a copy for himself without any expense, and if he gets twenty names, he can not only have five extra copies, but will receive the second volume of the Magazine splendidly bound, according to the offer in the premiums above.

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C. W. HOLDEN,
109 *Nassau Street, New-York.*

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TO AGENTS, POSTMASTERS, &C.

AS an inducement to greater activity on the part of those to whom we are already under so many obligations for their annual efforts to procure subscribers to *The Cultivator*, the publisher offers the following Premiums for subscriptions to the volume for 1849:

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2. To the one sending us the next largest number, the sum of FORTY DOLLARS, in books, and to include sets of The Cultivator and The Horticulturist, as above.

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8. For the TEN next largest lists, each, vols. 5 and 6 of The Cultivator, for 1838 and 1839, the last two edited by Judge Buel, and containing his portrait.

9. For the TEN next largest, each, a copy of Downing's Fruits and Fruit Trees, or any other work to the same amount, $1.50.

10. For the TEN next largest, each, a copy of Thomas' Fruit Culturist—50 cents.

☞ In all cases, the payments must accompany the orders for the papers.

☞ The books, in addition to those named, to make up the several sums offered, may be selected by the person entitled to them.

Patagonian Guano.

A SUPERIOR lot of Patagonian Guano just landing—put up in tight casks, thus preserving all the ammonia—for sale at two cents per lb., at the Agricultural Warehouse of S. C. HILLS & CO., 43 Fulton Street, New-York. Oct. 1, 1848.—4t.

THE CULTIVATOR,

DEVOTED TO THE INTERESTS OF

The Farmer, the Gardener, and the Fruit-Grower,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Hou[illegible], Barns, Farm Implements, Domestic Animals, Plants, Fruits, &c., &c.

THE CULTIVATOR enters upon its sixteenth volume, (the 6th of the "new series,") on the 1st of Jan., 1849. For a period of fifteen years, it has enjoyed a circulation, and exerted an influence, not exceeded it is believed, by any other journal in the country. That its interest and usefulness have been sustained from year to year, we have the most abundant evidence in its large sales, notwithstanding the multiplicity of agricultural journals which have come into existence within the past few years. It will be our aim to render it for the future, not only worthy the support of our rural population, but absolutely necessary to all who would keep themselves well informed as to the progress of agricultural improvement, both at home and abroad. Keeping constantly in view the great object for which THE CULTIVATOR was established,—"TO IMPROVE THE SOIL AND THE MIND,"—no effort will be spared to fill its pages with such matter as is best adapted to call into action the mental and physical energies of its readers,—to awaken inquiry as to the best and most profitable methods of farming, and to incite to efforts to carry them into effect.

Particular attention will be paid to RURAL ARCHITECTURE and numerous DESIGNS of FARM BUILDINGS, GATES, FENCES, and ORNAMENTAL STRUCTURES, will be given—to the department allotted to "THE GARDEN AND THE ORCHARD," which will be conducted by JOHN J. THOMAS, well known as the author of the "Fruit Culturist," and a practical Horticulturist of great skill—to "DOMESTIC AND RURAL ECONOMY," and to the "DISEASES OF ANIMALS," a subject of increasing interest to farmers.

TERMS.—For single copy, $1—for seven copies, $5—for fifteen copies, $10, and for any larger number at the same rate. All payments to be made in advance. All subscriptions to commence with the volume, and none received for less than a year.

☞ Postmasters and others interested in Agricultural improvement in all parts of the Union, are respectfully invited to act as Agents for The Cultivator, and to send on clubs of subscribers for the vol. for 1849. Specimen Nos. and Prospectuses will be furnished to all post-paid applicants. LUTHER TUCKER.

Albany, Dec. 1848.

Maryland Farms For Sale.

THE Subscriber having established an Agency for the sale of REAL ESTATE in Baltimore and Harford counties, Maryland, offers for sale, among many others, the following improved farms, all of which are in the immediate vicinity of turnpikes and lime:

117 acres, thirteen miles from Baltimore.
150 " adjoining the above.
100 " fourteen miles from Baltimore.
105 " nine miles from Baltimore.
160 " fifteen miles from Baltimore.
162 " twelve miles from Baltimore.
160 " seven miles from Baltimore.
108 " eighteen miles from Baltimore.
150 " nineteen miles from Baltimore.
108 " eighteen miles from Baltimore.

Also an old Tobacco Farm of *great natural fertility*, eighteen miles from Baltimore, and two from limestone, will be sold in lots to suit purchasers, at from ten to twelve dollars per acre, one third cash, and the balance in six years.

The prices of the improved farms range from fifteen to thirty dollars, one third cash, balance in from three to five years. The climate is very healthy, the water good and very plentiful, and the timber (principally chestnut,) abundant.

All communications, (post paid) will receive immediate attention. Persons wishing to view these lands, will, on application to STREET'S BULL'S HEAD TAVERN, North Front Street, Baltimore, be forwarded to my residence, eighteen miles from the city.

W. B. HAMILTON,
Long Green, Md.

Jan 1—1m*

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, FEBRUARY, 1849. VOL. VI.—NO. 2.

Climate and Products of Morocco.

Letter from the U. S. Consul.

"Land of the Moors," Tangier, Nov. 9, 1848.

FRIEND TUCKER—When, three years ago, I wrote my last communication for your excellent Cultivator, from my little Rural Gothic Cottage at Elmwood, on the banks of the Genesee, at Rochester, I little thought that my *next* would be addressed to you from an antiquated Moorish mansion, on the banks of the Straits of Gibraltar, in such a strange, wild, *unique* country as is this " Land of the Moors." And much less did I expect, while cultivating my ruta bagas and rearing my Short Horns and Herefords, in the valley of the Genesee, ever to be engaged in cultivating the Orange, the Fig, the Olive and the Pomegranate, and training my fleet barb, or Arabian charger, on the plains of Africa. Yet all these strange and unforeseen transitions have taken place in three short years, besides a great variety of equally incongruous incidents which have transpired in the interim. But you know that a love of change, and a propensity for adventure and experiment, are characteristics of the people of Yankeedom; and he must be sadly deficient in the attributes pertaining to a genuine son of Yankee-land, who has not, as occasion may offer, the ingenuity and tact to turn his hand to any employment that may suit his fancy or convenience—whether it be that of an amateur cultivator of nature's productions, either in the frigid or torrid zones, in the temperate or tropical climes—whether it be in wielding a pruning knife or an editorial pen—plowing the land or plowing the sea—whether in cutting the Gordion knot of political tacticians, or the knotty limbs of an unsound sapling—or whether in treading the thorny paths of political strife, or the more dignified and pleasing walks of diplomatic life. This versality of temper and character, which so peculiarly characterises the American people, seems strange and unaccountable to Europeans, although little is thought of it among ourselves.

Before leaving New-York, I promised to comply with your request, to give you some account of the climate, soil, productions, modes of cultivation, &c., in the Empire of Morocco. But I have been so short a time in this country, that I have not yet had an opportunity of observing *personally*, all the different operations of these strange people; and as they all speak in unknown tongues, (at least to me,) but little idea can be obtained by their descriptions, and I fear, therefore, that I shall not at this time be able to afford much either to instruct or interest your readers.

Tangier is in latitude 35° 48. I arrived here on the 14th of July. Previous to leaving my country, my friends thought it would be imprudent in me to reach this hot, scorching climate, in the height of its midsummer heat. But you may be surprised, as I have been, to learn that the heat of summer is not near as intense here as in the United States—even in the most northwardly states of New-York, Vermont, &c. I commenced on the 27th of July, noting the temperature by my thermometer, at 9, 12, 4 and 6 o'clock, and have kept it up nearly every day since; and from that date to the 20th of September, the mercury never rose above 77½, nor fell below 70¾ degrees. It is the most uniform climate that I have ever lived under; we have almost constantly fresh sea breezes, which very much temper the heat of the sun. I happened to notice in a New-York paper, that the thermometer at Washington, on the 28th of July, was at 86°; *here* it was at 73 on the same day. We had *no rains here during the summer season*, nor until the 20th of September, and yet vegetation seemed to thrive, and the land has produced its usual abundance. While the pasture lands in the valleys and on the up-lands, were baked so hard that they cracked open, leaving fissures large enough, in some instances, to admit a donkey's hoof, yet the grounds, vineyards, &c., which were under the process of tillage, did not appear to suffer at all from the drouth.

We had a few days of rain here, the latter part of September and the forepart of October, which gave a very rapid growth to vegetation, making a most remarkable change in the appearance of the whole landscape around. The weather, for the last two or three weeks has been clear and remarkably mild. Since the commencement of this month, the thermometer has ranged at about 65 degrees, and the people are now making their gardens, planting their vegetables—and in many instances, these productions are already up, and looking fresh and green. During a short ride into the country yesterday, I saw the heaths, in some places, literally covered with a most beautiful wild flower, a species of the crocus. The pear, the cherry, plum, orange, &c., are in blossom. It is no unusual thing to see the fig, orange, and other trees, having on them at the *same time*, fresh budding blossoms and ripe fruit. The fresh *fig* is a most delicious fruit, and it comes on in such a continuous succession that we have it in perfection during nearly the whole summer and autumn. It may seem somewhat paradoxical to say that one kind of this fruit is green when ripe, and another black when green—yet such is the fact.

Most of the tropical fruits grow here in perfection—the orange, lemon, lime, plantain, banana, fig, olive, date, &c., and the grapes are delicious. There are great varieties of this excellent fruit—some white, some black, and some of a wine color; the muscatels are very fine, and there is a kind which, from their remarkable length, and delicate, slender tapering form, I should call "the lady's finger," that are of a rich, sweet flavor. We have had ripe grapes here since the middle of July—a single cluster which was sent me by a friend, weighed three pounds. This luxurious fruit may be bought here during most or all of the summer months for *one cent per pound;* fine oranges and figs, from two to three cents a dozen—or much cheaper by the quantity.

The hills and valleys, for miles around this place, are covered with vineyards and orange groves—and most of my consular and diplomatic colleagues, have fine gardens, filled with all these delightful fruits. The Swedish, Dutch, Danish and Spanish gardens are most charming places of resort. There, also, are a great variety of flowers, and ornamental trees and shrubs; hundreds of yards of the different varieties of Geraniums, may be seen bordering the walks; and Oleanders, as large as good sized cherry trees, put forth most beautiful and fragrant flowers. The linden, the horse chestnut, the catalpa, the palm, the mountain laurel, the larch, and the various firs also adorn the grounds.

You will not be surprised, I presume, that amid such scenes, and under such tempting circumstances, my old horticultural mania should return. I have purchased of a Moor, a little vineyard and garden, containing about an acre of ground, and which, although somewhat run down for want of proper care and attention in cultivating it, has nevertheless, a large variety of grapes and figs, and a small assortment of oranges, pomegranates, &c., with pears, peaches, apricots, cherries, and the like; these latter are much inferior to our fruits of those classes, and I have ordered an assortment of all the best varieties of our American fruits, from our friend Moulson, of Rochester, which I intend to plant in my little domain, as soon as they arrive; together with a small, choice assortment of flower, garden and field seeds, which I have ordered to be sent me with the trees; and I may hereafter advise you as to the success of my experiments.

My little plantation is situated on the slope or terrace of a hill, a few rods outside of the city walls, (enclosed with a hedge of the ever verdant cane, already fifteen to twenty feet high,) and commands fine views of the surrounding orange groves and vineyards, the mountain peaks of Morocco, and the time-renowned "Pillars of Hercules"—as well as of the castle and upper portion of the town, and a delightful water view, overlooking the Bay and the Straits, with the mountains of Andalusia, and the rocky fortress of Gibraltar, peering up in the gray distance; all vessels going in or out of the Straits, pass within range of our view.

Labor here is remarkably cheap. The usual price for gardeners and other laborers, per day, is but two and a-half ounces or doces, which is equal to only 14 *cents*, our money. The usual hours of labor are from sunrise to 4 o'clock P. M., *without stopping for a regular meal*. But if these Moors and Arabs work cheap, they also live cheap; they will work all day on a small bit of bread and a handful of dates, or an onion.

Most kinds of provisions are likewise cheap. Beef is usually about 4 cents per Moorish pound, which is 24 ounces, or a pound and a-half, our weight. Eggs, one doce, or about 5¼ cents per dozen; chickens, from three to four doces each. Potatoes are dear, from two to three cents per lb. There is no reason for this, that I know of, excepting that it is too laborious raising them; for I believe that nothing of the rot has yet appeared in the potatoe here. I do not find any of the sweet potato raised here; I intend to try them. Butter is not sold by the pound; it is brought to market in small, earthen jars of various sizes, and sold by the lump. It is churned in goat skins, is as white as lard, and is generally dirty stuff, not fit to eat. We pay two and sixpence, 31¼ cents, per pound for English or Irish butter, of a passable quality, which we obtain through Gibraltar. Why do not some of our Yankee dairymen send over a cargo of their fine butter for this market? They might make a good speculation by it. Barley sells for three to four doces a mood—which weighs 27 lbs.—and wheat from four to six doces,—which is equal to about half a dollar a bushel;—aldora, or Egyptian corn, sells for about the same as barley—and also Indian corn, about the same. There are no oats of consequence raised. Wheat, barley and aldora are sown in January; the first two are harvested in June and July, and the aldora in October. Corn is planted in March, and gathered in September or October.

The *cattle* of this country are of a medium size, quite small boned, and with compact forms, and almost universally of a dull dun color, occasioned, I suppose, by their constant exposure to the hot sun of these latitudes; and they all have immensely long, slim, branching horns; the bulls are no exception in this particular; on the contrary, I should think they excelled the rest of the herd in this respect. The cattle all seem to be of a hardy nature, and keep in good condition on very slight feed; the cows, I believe, are about of a medium rate as milkers. The sheep are of a good size and fine form, but, judging from those that have come under my observation, they appear quite inferior as to wool:—they have very long, heavy fleeces, but they are much too coarse. The goats are the finest, I think, that I ever saw. Their long, fine, glossy fleeces, hang in rich profusion from their sides, resembling the most beautiful silk—their color is generally black—a few are white, and some are black and white.

This is the commencement of the *sheep festival* of the Moors, and thousands of sheep and goats have been thronging the markets for a week past. You could not go through the streets without meeting—here a Moor leading a buck or wether by the horns—there, one with a sheep's hind legs in his hands, trundling him along on his fore feet, after the wheel-barrow fashion—and yonder a wild-looking Arab, with a live sheep across his shoulders and around his neck.

In thinking of the dreadful slaughter to be made among these poor animals, I could not help repeating the words of the poet:

> "The lamb thy riot dooms to bleed to-day
> Had he thy reason would he skip and play?"

But of all the domestic animals of this country, the Arabian *horses*, or barbs, as they are called, are the most noble and beautiful. They are, in fact, renowned the world over, for their noble qualities and superior points. I have had the good fortune to obtain one of these fine, pure blooded stallions. Although but four years old, he stands full sixteen hands high, is of a jet, glossy black color, with a beautiful mane, a long sweeping tail, a finely arched neck, and clean limbs; and his movement is as light and graceful as that of a gazelle. He was procured for me of a Kabyle chief, in one of the interior provinces, through the exertions of a kind friend. Several of my consular colleagues have beautiful specimens of these noble barbs. The Moors and Arabs are strongly attached to their horses, and are very reluctant to part with them; they pet them, caress them, and even kiss them; and it is *said* they treat them with more kindness and fondness than they do their wives; but that must of course, be a scandal! The power of endurance which these horses possess, is truly surprising; they will travel day after day, over sandy plains or rocky mountains, on an amount of feed that would scarcely suffice for a sheep.

Horses are not allowed to be taken from this country without paying an export duty of one hundred dollars each; excepting that, as a matter of courtesy, the Emperor gives to the various Consuls General residing here, the privilege of shipping one occasionally, to their several countries. Mares are not allowed to be taken away at any price, and an export duty of $10 per head has to be paid for shipping bullocks from here.

No such thing as a wagon or wheeled carriage, was ever seen in this country. Horses, camels, mules and donkeys, or asses, are used as beasts of burden; but the beast of all work and all drudgery is the *donkey*, on his back are borne loads of wood, stone, straw, sand, lumber, manure, wild Arabs, live sheep, and in fact, everything portable. A drove of *forty* of these animals marched in defile before my door the other day, all laden with sand, to be used in re-building a portion of the consular house.

On market days (which take place on Thursday and Sunday of every week,) hundreds of these patient animals, and hundreds of camels, may be seen winding their way along the rugged mountain passes, and through the intervening valleys, and pouring from the hill-sides into the market place, (or soco, as it is called,) laden with the strangest looking cargoes and most wild and grotesque looking beings that man ever looked upon. You will see the wild Bedouin Arab from the desert, the ebony negro, the fierce mountaineer, the swarthy Kabyle—many with their huge shoulders and bronzed breasts, and their long brawny arms and legs, entirely naked—some mounted on lumbering camels, some on mules and asses—with the tattered remnants of their garments streaming to the breeze—some dashing onward on foot, driving droves of beasts before them:—and then, as they enter the soco, to see them running furiously through, and mingling with, a crowd of a thousand persons, composed of troops of fine, manly looking Moors of the town, with their white flowing haiks and their snowy-white turbans—and sharp-eyed Jews, with their close black caps, shrugging their shoulders and seeking for a close bargain—and amidst all this, to hear the loud yells, the almost deafening clamor and confusion of tongues, which rend the air—such scenes as these—so strange and so novel, combining the oriental with the grotesque, the savage and the ludicrous, are beyond any thing that the wildest imagination, in its strangest flights of fancy, can well conceive of.

But I am digressing. In speaking of the domestic animals of this country, I omitted to notice *swine*, for the very good reason that here they rank as *wild* animals instead of domestic. You are aware that the creeds of the Jews and Mahomedans interdict the use of pork. Consequently, there is nothing of the swine species to be found in this country, excepting the *wild Boar*; and these are quite abundant. Hunting the wild boar, is rare sport, and very exciting, withal. I have been on one of these wild forays among the mountains, and had two fair shots at a young Boar, and one at an Ichneumon, but my little daughter, who accompanied me to our encampment, says that I was "too humane to kill the poor creatures." I was obliged to accept of her ironical apology, for the want of a better one. Our party, however, killed two huge wild Boars, and I must confess that my "humanity" did not deprive me of the *gratification* of "being in at the death." They had immense tusks, and would weigh, I judged, 200lbs. each, although they were not fat. Their hair was of a dark iron gray color, and quite coarse. The meat of the wild Boar is sometimes very tender and of good flavor.

I have been trying to procure a young wild Boar to send you alive, but have not yet succeeded; for neither the Moors nor Jews dare be seen bringing one of them in—they dare scarcely touch these "unclean beasts," as they regard them. They do occasionally, however, slip a pig under their haik or blanket, and bring them stealthily into town. When I succeed in obtaining one, I will send him to you, if you wish. If they will not beat your neighbor Bement's Berkshires in bearing down the scales, they certainly will in *running*. *Leeches* put up for market, sell here for $14 per 1,000.

Well, I find I have written you a long, miscellaneous letter, without touching upon half the subjects I designed to. As to the *modus operandi* of tilling the soil, sowing and planting, and harvesting the various crops—the qualities of soil, and many other like matters—I shall have to defer a description of them until another time; if, perchance, you and your readers are not sated with a perusal of this lengthy, disjointed letter, which I have been obliged to dash off in great haste, without regard to method or systematic arrangement.

I must, however, before closing, notwithstanding its irrelevance, tell you of a *self-resurrection* which took place here the other day. Some two or three weeks since, while passing across the soco, or market place, I saw a troop of Moorish cavalry winding their way up the crooked road leading from the beach; after them and with another detachment of cavalry in the rear, came about one hundred prisoners, on foot, marching in single file, with a long, heavy chain extending along the whole line, resting on the shoulders of the prisoners, with a smaller lateral chain fastened around the neck of each prisoner, and made fast to the main chain. In this position they were marched from the prison at Tetuan (about thirty miles distant) for the purpose of being secured in the castle at Tangier. On the way, and just before reaching this place, one of the prisoners fell, exhausted with fatigue. On taking him up, they found him lifeless. When they arrived at the soco, it was nearly sunset; the cavalcade halted, and the officers held a consultation as to what should be done with the poor fellow's remains. They finally determined to deposite them in an open "saint's house," which stands near the centre of the market place, until morning, when they would have them interred. The body was taken upon the shoulders of three or four Moors, and, with the legs and arms dangling, as they passed by where I stood, thus conveyed to this temporary dead house, and there left, without a single watcher to guard it from violation. * * * * In the morning, they found that the dead man had *run away!*

Yours, truly, T. H. H.

P. S. It may not be known to the American commercial interest that there has recently been a *radical reduction* in the tariff import duties of this country. The duty used to be 20 per cent—it is now reduced to *ten per cent. ad valorem*—on all articles imported save on iron, which is reduced from $5 to 4 per cwt. Raw cotton to $3 per cwt.; raw silk from $1 to 50 cts. per lb. It is hoped that this favorable change may give a new impulse to our commerce with this country.

To Prevent a Cow from Kicking.—An exchange paper states, that a piece of wood in the shape of the hind leg of the cow, and made to fit the gambrel or hock joint, may be strapped and buckled on the leg so as wholly to prevent her from kicking.

Acres of Land in England.—The total acreage of England, is said to be 32,342,400, which is divided as follows:—

	Statute acres.
Amount of arable lands and gardens, ...	10,251,800
Meadows, pastures, and marshes,........	15,379,200
Wastes capable of improvement,........	3,454,000
Incapable of improvement,..............	3,256,400

To exterminate Sorrel.—Sow clover seed very thickly, with a small portion of timothy.

Sale of Short-horns in England.—At the recent sale of Sir Charles Knightly, twelve bulls and bull calves brought the sum of £769, 13s., ($3,853.25.) One thirteen months old, brought 140 guineas, ($700.) Another six months old, 115 guineas, ($575.) At another sale, 16 animals brought an average of £43 ($265) each. At another very large sale, the average obtained was £30, 9s., ($151.25) each.

Suggestions for Farmers.

The Study of Nature Recommended.

Editors Cultivator—Much has been said and written within the last few years on the importance of the study of Natural Science to the farmer; still, we think the subject is so important that there is little danger of too much being said. The study of Natural History has received so little attention in the United States, that very few farmers have a familiar knowledge of Chemistry, Geology, Mineralogy and Botany, not to mention Entomology, which may be said to be in its infancy in this country, a large portion of our insects yet remaining unknown and undescribed. Let the votary of Natural Science travel to collect specimens, and he will often be questioned respecting the use of his specimens. If he gather plants, the general impression will be that they are for medicine. He will rarely meet with any one who knows the utility of a cabinet or a herbarium, almost every body supposing that they are to be converted into money in some way; yet to what practical use many of the specimens can be applied, they cannot imagine.

It is an old saying, that "knowledge is power," and this maxim is most strikingly verified in the pursuit of farming; so much so that individuals, farming in the same neighborhood, with farms of an equal natural fertility, meet with widely different results. The one has large profits on his capital invested, and the other, perhaps sinks money, or with difficulty raises sufficient to defray all expenses and support his family. The one obeys nature and her laws, and the other manages without system and contrary to nature. It may be said that many farmers make money and are highly successful, with little or no knowledge of Natural Science.—Granted; yet it must be admitted that they have derived benefit from the example of others, who were acquainted with natural science, or they have more or less followed the instructions of men who, by experiment and observation, have obtained at least a partial knowledge of the laws of nature. Besides, if we examine closely, we shall find that most of our very ignorant rich farmers, have acquired money by great industry and economy, carrying the latter virtue to so great an extent as to deny themselves and families many of the conveniences and comforts of life. All will admit that a knowledge of Chemistry, Geology and Botany, embracing a knowledge of vegetable physiology, would be of great practical utilty to the farmer. Were he a chemist, he could analyze the soil, and to do this, sufficient for all practical purposes, is within the capacity of all. By analyzing the soil, and knowing in addition the composition of the plant cultivated, the farmer knows what his soil needs, to grow that plant in its greatest perfection; or, in other words, he can feed the plant its proper food, and in suitable quantities. The farmer deals with nature. The greater portion of his life is spent amid the scenes of nature; hence, the more he understands nature, the better will he know how to manage her in her varied changes. The great improvements that have been made in Agriculture during the last few years, are mainly owing to the appplication of science; and as yet we are but in the commencement of the improving era. Then it behooves us as farmers, to study nature, and let the youth of our land, the future farmers of the country, be taught the study of nature. Then, by knowledge joined with experiment, industry and economy, they will scarcely fail to enjoy a competence, besides having a greater opportunity to make new discoveries in agriculture and science, than the professor whose life is spent in the laboratory or academic hall.

Notwithstanding the great assistance science affords in the acquisition of wealth, we think the greatest recommendation to its study, is its power of affording happiness, which, after all, is the chief end and aim of every rational being. Our best and most permanent happiness, is mental, or derived from the mind. All other enjoyments are shared by the brutes, in common with man. Hence it follows, that the highly cultivated mind is capable of greater enjoyment than that which is uncultivated, because the cultivated mind has a greater variety of food to satisfy its desires. We say its capacity for happiness is the greatest; not that, in every instance, the cultivated mind is always the happiest. We think the cultivated mind, versed in Natural Science, is the happiest of all, because the study of nature is more congenial to the mind in its natural state than any other. Most of us recur with pleasure to the period of childhood, when we roamed in the woods and fields, gathering flowers and hunting birds' nests, or chased butterflies and played in the brooks. Then was the time that all nature looked smiling, and then was the time to have instilled in our breasts a love of nature, by instructing us in the first principles of natural science. We have been told that Mr. Barnes, whose name is identified with the conchology of this country, many years ago had charge of a public school in the city of New-York, and was highly successful in managing and improving his boys, besides implanting in their bosoms a strong love of nature, without interfering with their other studies. He encouraged the boys to gather curious stones, pebbles, shells, &c., during times of intermission and vacation, and to bring them to him. He would then name them, and talk about them, returning to each boy his own specimens, and the boys began to form cabinets for themselves. The effect was, it kept the boys out of mischief, besides affording them useful knowledge. Many of the boys of that school preferred gathering specimens in Natural History, to play, and several of them afterwards became distinguished naturalists. But the present system of common school education tends to deaden, instead of strengthen, a love of nature in children. Even in our higher schools and colleges, the study of Natural Science is considered of secondary importance, and there, if taught, it is genenerally done very superficially; however, a brighter day begins to dawn, and its importance is seen and felt by many.

A great proof of the power of the study of Natural History to afford happiness, is its health-giving principle. It leads its votaries to spend much time in the open air, amid the glorious scenes of creation, where their minds are agreeably entertained by the surrounding objects, whose order and beautiful adaptation of means to ends, excite both wonder and admiration. That the state of the mind has a great influence upon the health of the body, is well known to all. Its power to restore to health consumptive and dyspeptic persons, is magical. We know of several distinguished naturalists, who think that they are indebted to their love of nature for their health and life. At one time, the state of our health was such, that our friends supposed we would not live long, and we almost despaired of life. Away from home, in the University at Middletown, Ct., we began the study of mineralogy, and the formation of a cabinet. With congenial spirits, we roamed over the glorious hills of New England, examined her quarries, mines and stone fences, in search of specimens. We had happy times. Our health was restored.

A great recommendation to the study of nature, and one which should induce parents to have their children thus instructed, is that it is a great preventive of vice and dissipation, because the mind of the naturalist is never at loss for employment, for suitable food. Let him be where he may, the great book of nature is ever open, inviting his study and attention, always presenting something new or wonderful. The great order and variety which nature displays, is one great cause of the study of Natural History being so fascinating, since the love of variety is deeply implanted in the human heart. The mind of the student of nature is never at loss for company, for good society. He has no need of resorting to the tavern, the grog shop or gambling house, to pass away the time. Let our farmers' sons be well educated, especially in the different branches of Natural History, then they would not become dissatisfied with their vocation, as it sometimes happens, but they would prefer it to every other. Supposing that a farmer knows the correct name of every plant with its properties, that grows on his farm, the composition of its soil, its minerals and rocks; would not such knowledge add greatly to his happiness? Then he would work understandingly, and his daily walks in the fields would be enlivened by familiar acquaintances. Not a flower, or plant, or pebble, would escape his notice; indeed, there is nothing which tends more than the study of nature, to increase the powers of observation. The naturalist sees beauties unseen by others; tastes pleasures unfelt and unknown to others. "He sees wisdom in the trees, books in the running brooks, sermons in stones, and good in every thing." He does not become tired and disgusted with life, and find fault with the world and the order of Providence; but the more he studies, the more he discovers wisdom, design, and goodness in the arrangement of things, and a unity of design in that arrangement, proclaiming that its author is one and the same, possessing all knowledge and power. It has often been said that a country life is the happiest, and poets have often sung its praises; for this the citizen pants while toiling to amass a fortune, and yet such a one, after having accomplished his wishes, and purchased a situation in the country, is often doomed to disappointment, simply for the reason that such a life is different from his former habits, which have become to him a second nature; besides, he is ignorant of Natural History, and a country life soon loses its charms, and he longs to return to his former busy avocation. Had such a one a knowledge of and taste for nature, how happily could he pass his time amid the varied scenes of a country life. S. B. Buckley. *West Dresden, Yates Co., N. Y., Dec.* 1848.

The Education of Farmers' Daughters.

Eds. Cultivator—Most of the farmers of our country, are the sons of farmers; and most of their wives are the daughters of farmers. This shows the propriety of educating our children with reference to our own occupation. The first and most important step towards the improvement of the great agricultural community, is the improvement of the mind, by a proper early education. Until they as a class, are as well informed as those engaged in other pursuits, they must and will feel a degree of diffidence, a want of confidence in themselves. The most important duty we have to perform, either as parents or citizens, is that of properly educating and bringing up our children. Until the farmers so discharge that duty, as that their descendants rank equal with those engaged in other pursuits, they will be guilty, as they too long have been, of a great dereliction of duty.

I am pleased to see, of late, able articles in our journals, on the subject of giving our sons an agricultural education; but this should be coupled with a good common education, at least. I am proving the want of this in almost every sentence I write.

We should also remember, that the education of our daughters, is of equal importance, and that common justice requires that we give them an equal chance with our sons. It is true, our women do not vote at our elections, or hold political office, or manage the out door concerns of the farm; but it is equally true, that they exercise their full share of influence in all our concerns. They have the moulding, direction and training the minds of our children—the boys to the age of ten or twelve, and the girls to a much greater age; and nature has admirably fitted them for the performance of this important duty. Their early impressions, derived from the mother, are indelibly fixed in their minds, and have great weight in forming their future characters. Most of us, who had a mother living after we became old enough to recollect, can well remember the fine sympathetic feelings she possessed and taught us; and these are among the noblest feelings of the human heart. We can also well recollect the rigid principles of morality taught us by her, and the lasting impressions they made on our minds. If we look about among our acquaintance, we shall see that wherever there is a well educated intelligent mother, there is also an intelligent family of children. And this is a much more important matter, than the rearing of fine, high blooded animals with four legs.

If we will divest ourselves of pride and prejudice, and examine coolly, we shall see that our women have greater influence over us, than we are generally willing to admit.

Nor is the importance of educating our daughters less in a pecuniary than in a moral and intellectual point of view. Much of the success, prosperity and comfort of every farmer, depends upon the management of his indoor concerns, by his wife. There is no occupation in which intelligent women are more useful than that of farming. If we will look about among our acquaintance, we shall see that where-ever there is a wife of the right stamp; if the husband possesses ordinary ability and industry, they will be prosperous. If I am right in this, it shows the necessity of properly educating our daughters, *and giving them a proper training in all matters that relate to good housewifery*. Let us fit them to make good farmers' wives, and they will answer for those engaged in other pursuits. We should first attend to the useful and substantial part—*that well done*, if we can afford it, do something by way of the ornamental. But it is feared that some of our farmers pay too little attention to the former, and too much to the latter.

A young lady, with ever so fashionable an education, *if she possessed no knowledge of the kitchen, and the different departments of house-keeping*, however well she might show off in the parlor or drawing-room, would make a farmer a very unsuitable companion; she would not be worth as much as Lot's wife after she became saltified, because he could procure from her salt for his porridge.

The first and most important step, is to make our common schools good. If this is neglected, the great middling class of farmers, and almost all the poorer class of people, will fail in giving their children a proper education. I think select schools should not be encouraged. They are antagonist to the interest of the common school, (being usually no better than the common school *ought* to be,) each one injuring two or three, by the withdrawal of the children and influence of the most wealthy inhabitants of the district, besides their tendency to create aristocratic notions both in the parents and children of the more wealthy, and a degree of inferiority on the part of the parents and children of the less wealthy. Let them associate and be taught together on the principles of equality, which lie at the foundation of our government. Let mind here have fair play against mind, and talent will be brought out without reference to the wealth or poverty of the parents.

We should make our common schools such that our scholars can go from them direct to the academy, to good advantage, or procure a good common education without. When this is done, we shall have an intelligent agricultural community. **Farmer.** *Columbia, November*. 1848.

Means of Advancing the Interest of the Farmer.

Eds. Cultivator—Whatever will destroy the fondness for change, and create a thirst for a scientific knowledge of his business—whatever will gratify such thirst, in the highest degree, at the least possible expense—whatever will give him the most correct knowledge of the effect of his labor, when preparing the soil and putting in his seed—whatever will create in him a true taste for his business, a proper pride and self-respect, which follows a suitable education in all other business and professions—that which will enable him to observe the sublime and beautiful operations of nature, and fit him for converse with her, that he may receive her promises in advance of his toils, with a certainty of a corresponding reward, instead of a sickly hope, stimulated by the flattery of chance, will be found among the best means to advance the interest of the farmer. There is no other pursuit that more requires preparatory knowledge, than that of tilling the ground; any other business may depend upon experience alone, better than that of farming; as the result of experiments with the soil cannot be known oftener than once a year, it requires more than a life-time, perhaps, to establish any one fact, unless directed by a well grounded theory; then they become the most important auxiliaries to science, in extending the bounds of correct knowledge in the most important of all arts.

For the older portion of the farming community, such as could not be expected to attend agricultural schools, Farmers' Associations might be formed in every town, which should support an extensive agricultural library, situated in a central part of the community, where regular meetings might be held, and such subjects discussed, relating to the object of the association, as would be found most pleasant and profitable, avoiding always political and religious controversies. If no public speaker should be present, a free interchange of opinions, in a familiar conversation, would no doubt, be found pleasant and of great utility in combining the experience and knowledge of the whole association—not for the benefit of one—but each and every member present; and if the proceedings should be published, as has frequently been done in similar associations which have already been established, much good will be derived from them by other communities and individuals. The place of meeting would be a kind of Farmer's Exchange, where each would be able to learn the state of the market among themselves, and by each taking an agricultural periodical, they would learn the state of the market elsewhere; which, in addition to other valuable information, would prepare them to meet the most wily speculator, who might wish to buy their produce for less than its fair value, on his own grounds.

But for the rising generation, there should be an agricultural department in all our common schools and academies at least, and perhaps colleges, which, together with such other purely agricultural institutions as may be found necessary, would make our country, within a few years, blossom like the rose, and through the medium of our telegraphs, railroads and steamboats, diffuse a spirit of improvement over the whole habitable globe.

It is plain that the most essential knowledge should be first acquired; therefore, a piece of ground should be attached to every district school, especially in the country, and tilled by the students, under the superintendance of a competent agriculturist. The common objection to this seems to be the strongest argument that can show the necessity of it; the fact that it is almost impossible to prevent the destruction of every thing about the premises of a common school, by the mischief loving and careless part of the attendants, shows the necessity of an early check to that now all pervading and most pernicious propensity to destroy public property, or any other that immediate self-interest does not prompt us to protect. This propensity never can be more successfully corrected, with less pain and expense, than in early youth, nor is it more impracticeable than to correct any other habit, which if not restrained early, amounts in the older urchin to an uneasy propensity, resembling that which causes a horse to bite a fence or shade tree, or anything within reach of the bridle which restrains him from running at large. It would be placing our species on a level with the horse, to maintain that this disposition could not be successfully treated, if taken early and properly managed.

In striking out a course to "advance the interest of the Farmer," all narrow-minded policy should be set aside. If it should be thought necessary to endow an extensive state agricultural institution, it could not interfere in the least, with a similar department in our common schools and academies, neither could one do away with the necessity of the other. Instead of the object of one being accomplished by the other, the utility of each should and would be taught and learned in the other; thus would they harmonize, like the high and low notes in a most delightful piece of music, touched by the fingers of nature herself. Dean.

Agriculture of Virginia.

A Ramble in Southwestern Virginia.

Eds. Cultivator—Having just accomplished a tour through Southwestern Virginia, more familiarly and distinctively known in our state, by the soubriquet of "Little Tennessee," it may not be amiss to jot down "currente calamo," some recollections illustrative of that now secluded but interesting region.

A young friend and brother farmer as my companion, mounted on stout steeds, the most eligible means of locomotion in the present condition of "internal improvements" in the proposed route,—we set off on the evening of the day of the Presidential election. Guided by the light of the moon and the stars, we traveled until the rising sun of the 8th Nov. found us beyond the limits of our native county, "Old Augusta." We passed on successively through the counties of Rockbridge, Botetourt, and Roanoke, of which I have neither space or intention to write particularly, and of which there is less necessity, for their flourishing farms, beautiful villages, and stupendous "Natural Bridge," have already often found many and fitter pens to portray them.

The inclemency of the weather halted us for a day at the base of the Alleghany mountains. The following morning found us upon its summit, whence, casting a "lingering look" backwards on the blue mountain boundaries of our valley, we spurred on through the county of Montgomery, and crossing New River, on a handsome wooden bridge, we were in the thriving new county of Pulaski. On either side, we noticed beautiful farms—mostly covered with blue grass; and the "cattle upon a thousand hills," quietly grazing in plenty. Arriving upon the borders of Wythe county, we called upon Col. Richardson, by whom we were shown some fine cows and calves of the Matchless and Hampton breeds. (?) These are large and finely formed, commanding an excellent price. They were introduced into the county several years since, by some of its enterprising citizens.

Bidding adieu to the hospitable family of Col. Richardson, we next stopped with Mr. Chas. C. Tate. This gentleman owns a beautiful and extensive farm, well adapted to grazing purposes; and nearly the whole of the cleared land, about 800 acres, is well set in various kinds of grasses. The past season he has fattened and sold about 90 head of cattle. Some of his cattle show considerable improvement upon the native stock of the county. One of the steers which he had fattened, we saw butchered at the county seat, and it weighed 1670 lbs. *nett.* His sheep are of a cross of the Bakewell, upon the common stock of the country. Although not so large and heavy fleeced as the improved Cotswold, yet they are handsomely formed, evince great aptitude to fatten, and altogether, reflect credit upon their spirited breeder. His swine are a cross of the Berkshire from Massachusetts, and a large-framed white hog, obtained from near Lynchburg, Va. They have proved to be of perhaps the best breed yet introduced, being well suited to the farmers of that region. We were here shown a kind of grass, new to me, called from the name of the person who introduced it, the "Randall Grass." It is considered by some of the best farmers, a very valuable acquisition; it starts early in the spring, grows luxuriantly, and affords an abundant and nutritious food. It looks somewhat like the "Orchard Grass," but does not appear so coarse, nor does it grow so much in tufts. It is, probably, the English Blue grass. The common Blue grass grows spontaneously, and abounds. Stock fatten more rapidly upon it than any other—a mixture, however, of several species, is generally preferred.

We visited also, the adjoining farm, "Fort Chiswell." After an introduction to its worthy proprietor, at our request we were conducted to a distant part of the farm, and shown a lot of fat cattle. We estimated 20 of the best to weigh over 1800 lbs. gross, each. There were 125 in the lot; a part were of the Short horn, showing high blood and good treatment; the others, with but few exceptions, were crossed with the Matchless and Hampton stock. We also saw a lot of fat hogs; slaughtered—some of them weighed over 400 lbs. *nett;* a lot of 23, averaged 310 lbs., *nett.* We saw many other things to interest us in our ride over this magnificent estate of 4,000 acres. The county seat of Montgomery county was formerly located here. The old county jail is still standing, a miserable looking log hut, forcibly reminding one of the Black-hole in Calcutta—we were reluctantly compelled to decline for that time, a polite invitation to the mansion house, and parted with our attentive friend, under a promise to call upon him at some "more convenient season."

The following morning we left, with much regret, the kind and excellent family of Mr. Tate, who himself insisted on accompanying us a few miles, in order to show us the beautiful estate of Gurdon Kent, Esq. Unfortunately, Mr. Kent was absent from home; however, we took the liberty to ride through his farm, and view his fine herd of cattle, which was truly a gratifying sight. This is one of the best farms in the county. The fencing was in good repair, and substantial gates hung at the entrance of all the fields through which we passed. But a small portion of the arable land is in cultivation, grazing cattle being the great business of this country.

Here we parted with our gentlemanly companion, not however until we had gratefully accepted his kind proposal to rejoin us the next day, to make an excursion into Smythe, his native county, and adjoining Wythe. Wending along through two or more farms, we called upon C. L. Crockett, Esq., a very intelligent and agreeable gentleman, who gratified us in showing his stock and farm. Here, for the first and only time in this wealthy country, I saw an agricultural paper—the *Southern Planter.* I was afterwards informed that Mr. Crockett had been active in introducing improved breeds of stock, of different species, into that county. He kindly offered to accompany us, when we returned, to several portions of the adjoining counties, which we had not visited, and very much to my regret, an accident to my horse, only prevented our compliance with his polite invitation.

We then started, in company with Mr. Tate, for the Rich Valley in Smythe county. We saw many interesting things by the way, which space will not permit us to mention. We will but allude to the fine stock at the "Seven-mile-ford," a large and well managed farm on the middle fork of the Holston river. Indeed, every thing upon it reflected praise on its worthy and hospitable proprietor, Mr. Hanson.

We next visited the salt works in the Rich Valley, where we made the acquaintance of Thos. L. Preston, Esq., a devoted friend of agricultural science and agricultural improvement. On the day previous to our arrival, he had delivered, to a large assembly of the citizens of Smythe, at the Court house, an agricultural address, which was spoken of by all as an eloquent appeal, and calculated to do much toward the promotion of the noble cause. Mr. Preston is engaged in manufacturing salt; has two large furnaces in operation, making about 600 bushels per diem. The supply of salt water is thought to be inexhaustible. There are several other furnaces here, in operation, by different individuals. The salt is of a very superior quality, and wants but means of access to market to develope advantages to all concerned. Here too, is a bed of gypsum, of superior quality, extending about 15 miles in length, and several hundred feet in depth. Some of the banks are now being worked, and the gypsum sells at the banks for $3 per ton—while at the distance of only ten miles, the price is *doubled!* If proper facilities of transportation were afforded, it is considered that abundance could be furnished to supply the whole state of Virginia. Here again, the very earth cries out beseechingly, for a way to market. After spending a day with Mr. Preston, who had given us a real Virginia welcome, and who showed us all we could desire to see, we took our departure from his picturesque valley, which, embosomed in mountains, lay asleep in its beauty, like another, and a real "Leclusaval."

But it were too long to tell of all that interested us, even as farmers, totally neglecting the scientific, geological, mineralogical and manufactural interest—and it is high time this lucubration were brought to an end. which has unconsciously extended to something like prolixity. To close rapidly—we rambled still farther up the north fork of the Holston. This region is admirably adapted to grazing fine-wooled sheep, being generally too steep for cattle or cultivation; some gentlemen of this vicinity, having turned their attention to wool growing, I was induced to promise them the excess of my flocks of Spanish Merinos and Cotswolds. Here we saw many fine farms, and made valued acquaintances. Returning homewards, we made a detour to the left of our outward route; passing by quantities of rich land, whose virtues were scarcely even tested, we again reached New River, some ten miles below our former crossing, and directly opposite "Buchanan Bottom," the farm of Major Kent. We were sadly disappointed at losing the opportunity of a personal acquaintance with the Major, who was absent. After "presenting onr credentials," and exchanging salutations with the family, we rode through the fine farm of 5,000 acres—stopped to look at some superior milch cows, grazing in the field. They were large and well formed, showing fine blood. We took them to be Short horns, and crosses of the Durham and native stock. Other farms I would mention had I space; but with good wishes for our kind acquaintances, we must bid farewell to them and "Little Tennessee." Would that all Virginia could be fully impressed with the importance of this part of the state, and see that it is destined to a celebrity more to be envied than its present political one—that our legislators would come down from the clouds of federal politics, and look more to domestic necessities, and that the vast mines of wealth which now lie hidden away in that remote corner of the state, be left no longer unproductive, like the talent wrapped in a napkin and buried in the earth. And let us hope, that the projected system of internal improvement for this country, be speedily completed, to develope its mineral and agricultural resources, and appreciate its manufacturing power, which is now but dimly shadowed forth in its spirited little rolling mills and nail factory, when almost every mountain stream might work a Lowell, and Virginia, at length, become what is her right and her destiny,—an empire herself, and yet "imperium in imperio." S. F. C. *Walnut Hills, Augusta Co., Va., Dec.* 1848.

Sketches of Farms.

The Farm of W. A. Hayes, Esq.

Editors of the Cultivator—The agricultural readers in New-England are quite generally aware that this gentleman is a most systematic, enlightened and successful cultivator. He has long been a zealous promoter of improvements in farming, and that zeal has been directed by a most thorough knowledge of all its principles. In the month of October last, I had the pleasure of visiting Judge Hayes, at his farm in South Berwick, Me., and found much in his mode of culture that, in my view, is worthy of consideration. Some of the prominent points of his husbandry, I shall now notice, with the hope that the readers of *The Cultivator* may find something useful in the perusal.

Judge Hayes' farm consists of about 160 acres, the most of which he purchased some 30 years ago. He has, in addition, 60 or 70 acres of pasture, a mile or two from home. His land is the oldest settlement in that part of Maine; and some of it has been cropped for a long period of years. The Judge has in his possession the original deed from the Indian chief, to the first white or civilized proprietor, and he gave the deed of the premises to the Judge. The farm extends over a high hill, with low, wet lands on each side, and much of the soil is naturally quite thin. As it came into his possession, it was mostly pasture land, covered with bushes, and other coarse herbage, of little value. The arable land had been hard-run, producing only hay enough for the wintering of 6 or 8 head of cattle.

It has, through life, been a favorite object with this agriculturist, to set such an example of judicious and systematic husbandry as any farmer, of moderate means and some enterprise, might follow with safety and advantage. The land being in an exhausted condition, he determined to render it gradually more productive, without any great outlay of capital at any one time. Although his means have for many years, been ample, and the temptation sometimes quite inviting, to enter quite largely into improvements involving quite an additional investment, he has still adhered to his original determination. The improvements have been made to pay as he went along, and the farming business has not been suffered to run in debt to him.

The mansion and farm-buildings stand upon rising ground, a little back from the public road, the elevation affording quite an extended view of the adjacent country. The land rises gradually back of the buildings, terminating in quite an eminence, which commands a fine prospect of great extent, in every direction. About every acre of the estate, on either side of the slope, may here be seen. The mansion is approached, in front, by successive flights of granite steps, with turfed terraces intervening, filled with a variety of shrubs and low-growing trees, with ornamental foliage, arranged and cultured with much taste by the ladies. The house was built by the former proprietor; it is spacious, with an aspect most rural and comfortable. The farm-buildings combine every thing desirable for convenience, neatness and order in their arrangement. In the rear of the buildings is an ample kitchen-garden, and a fine young orchard of ingrafted fruit of 15 acres. A southern slope is deemed highly favorable for fruit-trees in that bleak country; and the fine appearance of this orchard would seem to substantiate it. The fences are all durably built, and kept in good repair. A farm-road runs nearly through the premises, dividing them about midway. Strong and conveniently hung gates, with granite posts, are placed along this road. They have been erected at different times, as the materials could be advantageously procured in the way of an exchange trade; thus exemplifying the determination before stated in proceeding gradually and judiciously in outlays for improvements.

The Barns—The principal barn is 105 feet long by 43 feet wide, with 20 foot posts. In stowing away hay in this barn, the mows are gradually laid out on each side until they meet, forming an arch over the floor sufficiently high to walk under. All the room over head can thus be filled with hay. Stables run the whole length of the barn, on the south side, with a cellar underneath them. There is another cellar for roots at one end of the barn, well finished and ventilated, and convenient for feeding the cattle. A grain-barn, 35 by 26, stands a little back upon the side-hill, with a basement story, open on the south side, for the storage of every farm implement. This is the "place" for every tool not in use, and here it may be found, "in its place."

When the large barn was built, it was most thoroughly underpinned with granite, and the cracks made perfectly tight with mortar. It was soon found that the sills and sleepers began to rot, by reason of moisture, and confined air, and three or four feet of the bottom of the hay-mow was damaged from the same cause. It became necessary to remove the underpinning between the posts: and a circulation of air is now deemed of importance, for the preservation of the timbers and the sweetness of the hay, in the bottom of the mow. It is thought that the cellar should be left open on the south side, for the health of the cattle, as well as for the other considerations named.

The corn-house stands a little away from the other buildings. It is set upon substantial granite posts, about three feet above the surface of the ground. Smooth slate-stones are placed on top of these granite posts, projecting over them several inches, on all sides, which effectually keeps out the rats. Light, moveable steps are placed at the entrance, when it is necessary to pass in and out with grain, and are removed when not in actual use. There are bins in this building for the storage of all kinds of grain raised upon the farm, as fast as it is threshed.

Care of Stock—Judge Hayes is very considerate of the comfort and consequent thrift of his farm stock, during the inclemency of the winter. I give his own concise and sensible remarks upon this subject:—

"The cattle are fed several times in the morning, and carefully carded; and at about 9 o'clock turned out for water and for exercise. While they are drinking, the stalls are cleaned, and supplied with fresh and clean litter, and in an hour or two they are again tied up. If the weather is stormy or very cold, they are permitted to return to their stalls as soon as possible; but if the weather is mild, they are suffered to remain out longer, but not more than two hours. They are fed in their stalls several times during the day, always giving a little at a time. In the afternoon, they are again turned out and watered, and suffered to remain out as long as in the morning. The stalls having been again cleaned and littered, the cattle are again tied up for the night. Great care is taken to make the barn warm. When the weather is very cold, the windows and doors are closely shut. In this way, the cattle, being more comfortable, are kept at much less expense and thrive better.

"My business calls me often to ride through the county of York, and it is distressing to see seven-eighths of the stock, (working oxen excepted,) exposed to the severity of the weather in cold winter days, from morning till night, without shelter. Cattle so situated will take little exercise, but stand shivering with the cold, not being able to lie down comfortably on the cold melting snow. It is a mistaken notion that cattle and sheep should be much exposed to severe cold weather to render them hardy. Some farmers say they leave their cattle out, because their business calls them away from home. This is a poor excuse. It would be much better to turn their cattle out for water only once each day, and tie them up immediately after drinking, than to leave them out all day exposed to the open air. Then the humane farmer, when gone from home and exposed to the storms of our inclement winter, may feel some satisfaction in the reflection that he has discharged his duty to his live stock, by placing them in a dry and warm shelter."

MANUFACTURE OF MANURE—Lands that are in good condition, are kept so with comparative ease; but those that have become exhausted of their vegetable matter by a course of skinning, are with much difficulty made productive. While in this state, they soon pack down into a hard and lifeless condition, after being plowed, and of course, are far more susceptible to drouth. It is impossible for the roots of cultivated plants to expand or find nourishment in them. Compost manure, having vegetable matter for its basis, and the necessary salts well developed in its combination, being liberally supplied to these infertile soils, renders them more permeable to heat, air and moisture; it operates as a sponge in the soil to attract and retain moisture; and it contains the elements of a robust life for the growing crop. We see that nature every where forms a rich vegetable mould for her heavy forests to rear their towering heads, or her broad prairies to luxuriate in their variegated and exuberant foliage. A main dependance, then, in bringing up an exhausted soil to a state of productiveness, must ordinarily be upon augmenting the amount of vegetable matter in and upon the soil.

It has been a favorite object with Judge Hayes, to turn every thing of this kind to the best account. He preserves the vegetable matter of the decomposing sod, from the dissipating influence of sun and wind, by one careful plowing; leaving it in its inverted position through the whole rotation of crops following. All the waste vegetable substances that are to be found on the farm, are annually gathered up and carried to the barn-yard and piggery, to be converted into manure for the tillage fields. Quantities of leaves are gathered in the fall, and even late in the spring, for littering the cattle and swine. The bushes, ferns and coarse grasses, left by the cattle in the pastures, are annually mowed and carted to the yards; and a better herbage coming in, the quality of the pastures is improved. The sour, coarse grasses of the unreclaimed lowlands are brought to the barn and stacked outside, to be used for littering the stalls. All the refuse straw is saved for the same purpose.

The large barn is placed upon a side-hill, with yards all round it. Spacious apartments are thus afforded for the different kinds of stock, and also places of deposite for the various materials to be converted into manure, in the different stages of their decomposition or manufacture. The yard on the north side of the barn has been dug out from the side-hill, and has a bank wall to prevent the caving in of the road above it. It is therefore a convenient place for the deposite of materials that require more than one season to rot them. To this place all the potato tops, coarse grass, brakes, bushes of one years' growth, and any and all other coarse vegetable substances are brought and tipped off. The industry and care exhibited in the collection of these materials is most commendable, and in the course of the season their accumulation becomes very important.

There is a deposite of swamp muck, covering several acres, from 8 to 15 feet in depth, within a few rods of the barn. The road is a little descending all the way from the swamp to the yards, and they are well covered with it each year, at little expense. A good coat is also spread over the bottom of the barn-cellar. This cellar was commenced some time after the barn was built. It has been enlarged from year to year by throwing the soil under the barn, back upon the manure, in about equal proportions with it, at suitable intervals during the winter.

The yards are plowed and dug over several times during the season, and more muck, soil, lime or ashes are occasionally added to absorb all the gases, the bad and unhealthy odors. From 10 to 30 casks of lime have been annually used in the composts. Judge Hayes thinks that so far as the uninterrupted health of his family may be considered a test in the case, the prudence and benefit of the practice, on this score only, are fully established. Early in the spring, the contents of the cellar are overhauled, from end to end, which is thought to promote all the desirable decomposition before carting on to the soil.

The horse-barn stands near the out-buildings of the house, and the manure is thrown into a yard excavated and walled up, excepting at the lowest end. A stoned drain, leading from the house to this yard, with a considerable descent, conducts all the wash of the house, and the night soil, on the horse manure, keeping it sufficiently moist to prevent too rapid fermentation. Muck, soil, &c. are occasionally added, and three or four hogs are busily at work amongst it. Should the drain at any time become offensive, there is an abundance of water at hand to flood it and remove impurities. The horses stand upon several inches of tan-bark which has been previously exposed to the atmosphere for several months. After becoming well saturated with their urine, it is thrown out with the manure, and is thought to be a good material for the soil of the lowland meadow.

Judge Hayes related an interesting example, in the case of a neighboring farmer, of the advantage of a diligent collection of materials to be converted into manure. A young man came into possession of a poor, run-down farm at the death of his father. Being of an enterprising turn, and desirous of bringing up the homestead to a more productive state, he applied to the Judge for advice as to the kind of husbandry to be adopted. He was told to collect materials for increasing his manure. To cover the yards and litter the stables with the best material he could command; and if nothing better could be procured, to take sand or gravel,—or at any rate, something,—to absorb the liquid and gases of the manure from the stock. As the farm afforded no muck, the young man commenced by carting in turf and soil from the road-side. The stables were sprinkled with loam, daily, to absorb the urine. When this resource failed, he carted turf and soil from the fields. In a few years he was enabled to more than double the stock and dairy produce of his farm, through the increased productiveness of the fields; and this again increased the facilities for making manure. His farm is now productive, and with ease he lays by a handsome sum annually, from the products of his dairy.

The Piggery—The excellent arrangements for the swine, and the ingenuity of Judge Hayes in his manufacture of manure from this source, are so much better described by himself than I can do it, that I quote his own remarks:—

"My hog stye is seventy feet long and seventeen feet wide. There is one aisle on one side, and seven partitions for hogs on the other. A place for dressing the hogs, and kettle for cooking their food, are in the centre. Doors are so placed that the swine may be removed from one apartment to the other, and to the area for dressing them. There is a row of yards on the side of the stye, one for each apartment. The doors leading to these yards are hung at the top, so as to swing either way, and thus the hogs may go in or out at their pleasure, and always have their doors, when desirable, closed after them. These doors should be made of plank or double boards, to render them so heavy that the wind will not keep them open in cold stormy weather. The hog is proverbially called a dirty animal. This depends very much on his *education*. If he has been *brought up* with dirty habits, he will continue in them, unless great pains are taken to change them. But on the contrary, if he has acquired good habits, he will endure great suffering to avoid a filthy action. Hogs in this land of barren soil are especially valuable for making manure. I could never obtain much advantage from the rooting of well fed swine; but the quantity of urine they discharge is very great and valuable. It is very important that the evacuations of the hog should always be deposited on the manure heap. If they are discharged in the stye or in his nest, they will be principally lost. Now by observing the regular habits of this animal, and taking a little pains, a bad habit in this respect may soon be cured. The confined hog always goes to a wet place to make his evacuations. If then, you wish the hog to change his place for doing this, dig a small, hollow place in the manure heap, and keep it wet for a few days by turning in water occasionally; at the same time make the place clean and dry which you wish him to abandon. He will then probably go to the wet place in the manure yard to make his deposites; but if he should not do so, fasten him out from the stye for a few days, so that he shall be compelled to go to the desired place, keeping the place you wish him to abandon, clean and dry in the mean time, and you will, without fail accomplish your object. This to some, will appear a low, trifling subject to write about, but the farmer, to thrive, must attend to small concerns. I usually keep ten old hogs on my farm, and pigs to supply their place. They are fed with the waste of the kitchen, dairy, and with boiled roots, apples and some meal."

We are informed that it is a proverb with the Flemish farmer, that "manure is the god of agriculture;" and with the Scottish farmer, that "muck (manure,) is the mother of the meal chest." These are strong and significant expressions; but one seems to find them pretty fully realised in the husbandry of Judge Hayes.

In my next communication, I propose to continue my sketches of this gentleman's farming, under the following heads:

1st. Management of the Arable Land
2d. Improvement by Mixing Soils.
3d. Improvement of the Pastures.
4th. Draining and reclaiming Wet Lands.

Brattleboro', Vt. Dec. 25, 1848. F. Holbrook.

One house in New-York, shipped on one day recently, 983,445 lbs. cheese for Europe, valued at $68,841.

The Poultry Yard.

Varieties of the Domestic Fowl.

In our last, we described several of the original stocks and wild species of the fowl. The domestic varieties which have sprung from these, are very numerous—a circumstance which need create little surprise, when it is considered that the bird has been in a state of subjugation for several thousand years, and has passed from one country to another over the principal portion of the globe.

Game Fowl.—Of the domesticated breeds which are believed to retain in a striking degree their original characters, the game fowl, fig. 15, is entitled to the first rank. **Martin**, in his late work, as we have already quoted, (see last number,) conjectures that the beautiful variety of the game fowl called the "black-breasted red," may have been derived from a species of India jungle fowl. He further mentions that "the Earl of Derby possesses a breed which has been in possession of that noble family for many generations, and which is sedulously preserved from base alloy. It is a black-breasted red, with a purple band across the wing, and though superior in size to the Bankiva jungle-fowl, it closely resembles that bird in plumage and in elegance of contour."

15—GAME COCK.

Although the fowl was found in a domestic state in Britain, at the time of the Roman conquest, it is probable that the game breed was introduced after that event. Martin remarks that the ancient Greeks possessed several renowned breeds of game fowls, and that Media and Persia possessed others of first rate excellence; but he thinks it probable that this breed was introduced by the Romans, who are supposed to have derived it from the Persians, when Britain was a Roman colony.

But whatever may have been the way in which the game fowl was carried into England, it has long been there cultivated with such care, and has attained such perfection, that it has been by some naturalists expressly denominated "the English Fowl."

Formerly, the great inducement for keeping the game fowl, was its employment in cock-fighting, a barbarous sport, which has for several years been forbidden by law in England, and several parts of this country; but the breed is still preserved by many, not, as has been observed, "for fighting, but for its beauty, its purity, and ancient lineage."

There are several varieties of the game fowl, each of which has or has had its admirers and patrons. The points which distinguish the best, are given as follows

"The head ought to be small, the eyes large and brisk, and the beak strong and hooked at the setting on; its color ought also to answer to that of the principal or general color of the feathers, whether they be yellow, reddish, or gray. The beam of his leg ought to be very strong, and according to his plumage either blue, gray or yellow; and the spurs ought to be rough, long and sharp, a little bending and pointing inward. The three colors esteemed in a game-cock are gray, yellow, and red, with a black breast."

"It is not," says Martin, "for its pugnacious qualities that the game fowl is to be noticed—it yields to no breed, nay, perhaps is superior to most in the whiteness and sapidity of its flesh; the hens are excellent layers, and the eggs, though of moderate size only, are remarkable for the delicacy of their flavor. The game-cock is very attentive to his female train, and ever ready to do battle in their defence, but not unfrequently he becomes savage and dangerous. We have ourselves more than once been fiercely assailed by a game-cock, and be it observed, a blow from his spur is no trifle; several instances have come under our notice in which children have been severely injured, and we have read and heard of cases in which children have been killed.

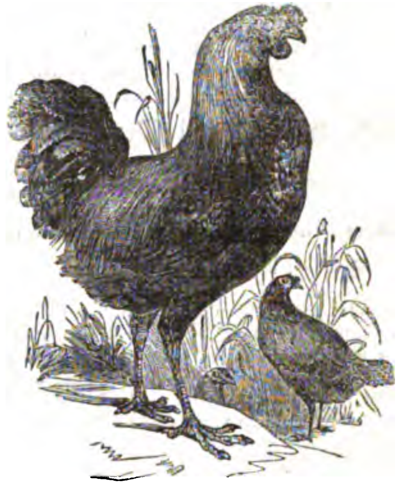
"Of all the breeds, in our eyes, the game breed is the most beautiful, whether we look to contour or to colouring; the cock carries himself proudly yet gracefully; his port and bearing proclaim his fiery spirit; his undaunted mettle, which endures even to his last breath, for while postrate and mortally wounded he will answer the insulting crow of his victorious rival, and make a last effort to revenge himself before the spark of life is extinct. No wonder that the gallant cock should have been chosen as the emblem of courage."

The game fowl has been introduced into this country and is bred by several amateurs in great beauty and perfection.

Great Malay Fowl.—This is undoubtedly descended from the *Gallus giganteus*, which is a native of Java, Sumatra, and probably, of other parts of southern Asia. It is still found in the islands named. But we are informed by various travellers that it is kept in a domesticated state not only in India, but in the Malay peninsula, in Cochin-China, and China. It has long been known in Europe and America. It is unquestionably the parent stock of the kinds known under the names of Malay, India, Chittagong, Java, St. Jago, Cochin-Chinese, Chinese, and in some parts of America, as the Bucks County, and Ostrich fowl. A cross of it probably prevails in all the larger breeds. The trifling differences which appear in the kinds mentioned, Martin attributes to the influence of domestication and accidental or designed crosses.

The accompanying portrait, (fig. 16,) is given by Martin as representing the truest type of the species—*G. giganteus*. He gives the following excellent description of the bird:

"The male, in his natural attitude, often considerably exceeds two feet in height, from the ground to the crown of the head. The comb extends backwards in a line with the eyes; it is low, thick, destitute of serrations, and has the appearance as if its ridge had been cut off. The wattles hanging from the under mandible are small, and the throat is bare. The neck is long, and covered with hackles of a pale golden reddish color, which extend to the upper part of the back. The middle of the back, and the lesser wing coverts are of a deep chestnut, and the webs of the feathers are disunited; the greater wing coverts are glossy green; the secondaries and quill-feathers are of a pale reddish yellow on their outer webs. The hackles of the rump are long and drooping, and are of a pale reddish yellow. The tail feathers are of a glossy green. The under parts are generally of a glossy greenish black, with high reflections, each feather being of a deep, chestnut at the base, producing somewhat of a mottled appearance, especially if the plumage be a little deranged. The body is stout, and the legs are long, but very robust. In proportion to the size of the body, and length of the neck and limbs, the head seems small, and is far from being pleasing in appearance, the curtailment of the comb and wattles seeming the result of injury or malformation. The gait is heavy and destitute of alertness, and the bird, as we have frequently seen, often reposes resting on the tarsi or shanks, their whole length being applied to the ground. The emeu rests in the same manner. The attitude is uncouth, and gives the idea of the bird being oppressed with its own weight. It is very probable that this gigantic fowl is less disposed to mount the trees and roost on the branches than most others of the genus; and this strange attitude may be the ordinary mode of taking repose. The crow of the cock, instead of being a clear ringing tone, heartily delivered, as if in defiance of every rival, like the blast of the knight's clarion on the listed field, is short, hoarse, and monotonous, more like a croak than a crow."



16—KULM OR MALAY FOWL.

As before remarked, this race, in a domestic state, presents considerable variation of characters; but we agree with the author above quoted, that the stock represented by the cut shows the greatest purity, and indicates the least departure from the original. The breed in its pure state is generally not handsome, either in form or plumage, and its flesh is coarse and wanting in flavor. It is chiefly valuable for crossing varieties, in which increase of size is desirable. Much, however depends on the manner of breeding. By care and judgment in selecting the best formed and finest boned specimens for propagation, the breed can be greatly changed and improved in the course of a few generations. Several instances of this kind have occurred under our own observation. The celebrated Cochin-China fowls kept in Queen Victoria's aviary, are regarded by Martin as only a sub-variety of the great Malay.

Valuable stocks have originated by crossing different branches of the Malay with other breeds. Dickson thinks it is very probable that the Dorking originated by a cross between the Malay and the game fowl. A writer in the Scottish *Quarterly Journal of Agriculture* is of the same opinion. The Jersey-blue indicates a similar mixture.

As we commonly see the Malay, it possesses but little spirit and courage; yet a variety of the race is cultivated in India, which is *game*. We saw some specimens of this game stock, twenty-five years ago. They were mostly white, but in general characters corresponded to the figure and description above given, except that they were less in size, and were much more active. In courage they were unflinching; and the young would sometimes pick out each others' eyes, and tear their heads bare to the skull, before they were old enough to crow.

A breed was established in England about seventy years ago, by the Duke of Leeds, called the "Shake-bag" breed, which obtained great celebrity, for the strength and prowess of the cocks. Martin observes that "this breed was probably formed by a cross with the *Gallus giganteus;* the male frequently exceeded ten pounds in weight, and to his great strength is added spirit and determination." This breed is thought to be now extinct. It was sometimes called by authors the "shack-back," or "shag-back" breed; but Martin suggests that as it was formerly the practice in cock-fighting to challenge all comers with the cock *concealed in a bag,* "the tremendous power and size of the Duke of Leeds' fowl, proved so superior to those of all competitors, and usually securing conquest, it eventually obtained the name *par excellence,* of *Shake-bag,* which was corrupted to the other terms."

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Raising Fruit Trees—Inquiries Answered.

A correspondent in Virginia, makes the following inquiries:—

Will apple, pear, and quince seeds lose their vitality by being kept dry in boxes six or twelve months ?

[They would probably be more or less injured, and perhaps in some cases wholly spoiled. Pear seeds have been kept dry a few months, and after exposure to moisture and frost, have vegetated finely. In other cases, apple and pear seeds, so treated, have nearly failed. Security would direct that the seeds be kept moderately moist from the time that they are taken from the fruit. After having become much dried, moisture and frost operate in softening and splitting the horny covering.]

Should peach stones be planted immediately after the fruit is taken from them, and will they come up well when taken from under the trees and planted at this season of the year [late autumn,] where they have been lying since they fell from the tree; and will the stones which have been kept dry in boxes the same length of time, come up as well as if planted fresh ?

[In all cases, the seeds of fruit trees are best if as fresh as possible; but peach stones may be kept some months dry with small injury. Some nurserymen plant them after the lapse of a year, but they do not often succeed so well. Under the tree, shaded from the sun, and in contact with the moist earth, they might dry but little; and again, if in hot sunshine and on dusty ground, they might suffer severely. They should always be cracked before planting, in which case freezing is not necessary, but only facilitates the splitting of the stone. Too much moisture spoils them.]

Which are twenty of the best peaches, and twenty of the best plums?

[*Peaches*—Early York (serrated,) Early Tillotson, Cole's Early Red, Cooledge's Favorite, White Imperial, George IV, Grosse Mignonne, Bergen's Yellow, Large Early York, Large Red Rareripe, Bellegarde, Early Newington, Nivette, Morris' White, Old Mixon Free, Crawford's Early, President, Noblesse, Crawford's Late, Druid Hill.

Plums—Primordian, Imperial Ottoman, Lawrence Gage, Early Orleans, Purple Gage (genuine,) Red Diaper, Purple Favorite, Red Gage, Jefferson, Imperial Gage, Lombard or Bleecker's Scarlet, Washington, Green Gage, Bleecker's Gage, Huling's Superb, Coe's Golden Drop, Frost Gage, Blue Imperatrice.]

The seed of what plum trees are best to raise stocks from ?

[On strong soils, where the plum flourishes well, any thrifty growing healthy sort may be taken, as the horse plum. On soils less favorable, those sorts least liable to cast their leaves prematurely will usually be found best. Some of the most vigorous varieties of the wild plum are well adapted to light or sandy soils.]

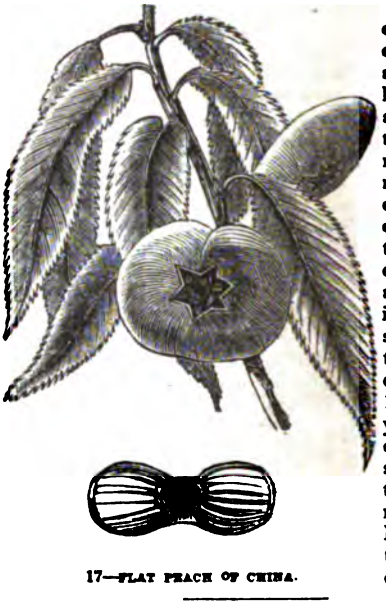
Which are the ten finest Raspberries, and which the ten best Gooseberries?

[Fine varieties of the Raspberry are not numerous. The Red and the Yellow Antwerps are the old standards. For a hardy variety in the northern states and on strong or heavy soils, probably none exceeds the genuine Red Antwerp. The Franconia and Fastolff resemble it, and are both fine. The Red Cretan has proved very productive on light soils. The common Red Garden Raspberry, is a good early sort. The American White, and American Black, are distinguished for their high flavor, though rather small in size.

Out of the hundreds of English Gooseberries, very few have been so widely cultivated in this country as to enable one to pronounce upon their general adaptation and excellence. Among these, the Roaring Lion, Crown Bob, Whitesmith, Waterloo, and Champaigne, are fine, and have perhaps succeeded as well as any.]

What is the form, size, color, &c., of the Chinese Flat Peach?

[It is so flat or compressed on its base and apex, as nearly to resemble a wheel, the transverse diameter being nearly 3 inches, while the distance from the stem to the crown is only about ¾ of an inch, a mere skin covering the stone at each end, (fig. 17.) It is pale yellow, reddened in the sun, and is said to be a good melting peach. It has not fruited in this country.]



17—FLAT PEACH OF CHINA.

The Double Brugmansia.

Among house-plants, one of the most magnificent is the BRUGMANSIA. The old *Brugmansia suaveolens,* formerly known as the *Datura arborea,* has been long in cultivation, and is remarkable for its large, pure white, bell-shaped or trumpet-shaped pendant flowers. Loudon states, in his Suburban Gardener, that "in the garden of —— Durant, Esq., at Putney Hill, Brugmansias have grown and flowered to a degree of perfection which would hardly be credited by those who have not seen the plants. Some of them are nearly six

18—DOUBLE BRUGMANSIA.

feet high, with woody stems three inches in diameter; and one in the summer of 1837, bore upwards of 2,000 flowers." The treatment they received, was to keep them in the frame in the reserve ground during the winter, and to turn them out into very rich soil, late in the spring, and keep them well supplied with water during summer. It must be evident at a glance that so large and vigorous a plant needs a pot or tub of very large dimensions. When well treated, it continues in flower for several months during summer and a part of autumn.

The Double Brugmansia, (*B. Knightii,*) figured above, and taken from a late number of the *Horticulturist*, an exact portrait of a fine specimen in possession of the editor, is thus described in that interesting Magazine:—"The flowers are pure white, long trumpet-shaped and double,—one tube being inserted within the other. The immense size of the flowers—each about nine inches long, and the curiously ruffled appearance of the lower part of the corolla, make it a most conspicuous object when in full bloom. Some specimens, six or eight feet high, which we saw in full bloom at Montgomery Place lately, were the most superb and striking objects in the large and beautiful flower garden of that demesne."

Culture of Strawberries.

A practical man, who writes in the Horticulturist, says: "Strawberries can be produced in great abundance, and with more ease than any other valuable fruit. With a moderate degree of care and attention, they will yield at the rate of *one hundred bushels* per acre. They will grow freely on any soil that will give a good crop of corn; and if planted early in spring, will yield a fair crop in June." He says a common error is to plant them in old worn out garden soils, or to manure them too highly, which gives vines, but no fruit. The best is a *good, deep, new soil*, not excessively rich.

Pruning Transplanted Evergreens.

The following interesting experiment, showing the equal importance of pruning evergreens and deciduous trees, when transplanted with mutilated roots, is given in a late number of *The Horticulturist:*

"In April last, I obtained at Flushing, twelve trees of the Norway Spruce. They were sent to me as they are grown in the nurseries, with the limbs starting from the roots. They were very badly taken up, and still worse packed. The small amount of moss which was put around the roots was entirely dry, and the roots themselves were badly bruised and broken in taking up or on their passage.

"Three of the best of the trees I set out in the shaded grounds about my house, leaving all the limbs untouched.

"The remaining nine were planted on the adjacent streets, exposed to the full blaze of the sun, and the reflection from the dry dust; and thinking that the condition of these nine trees required decided remedies, I pruned them severely, leaving only those limbs which were within a few feet of the top.

"They were all planted in the most careful manner, were well mulched and watered, but the three first mentioned were watered most frequently, and were protected most of the day by the shade of other trees. Now for the result: all of the trees on the street are alive, and eight of them have thrown out shoots several inches long. The ninth stands in an unfavorable position;

but the buds are just now beginning to push, and the tree will live.

"Of the three trees planted about my house, one died early, though watered daily. One still retains its leaves and partially its green color, but shows no other sign of vitality. The third is in much the same state with the ninth, above mentioned; but if anything, its condition is less favorable. I think the trees could not have been saved without the severe pruning which they received."

Horticultural Miscellanies.

Tulip.—In Persia, where the tulip is abundant, it is considered as the emblem of perfect lovers. "When a young man," says Chardin, "presents one to his mistress, he gives her to understand, by the general color of the flower, that he is on fire with her beauty, and by the black base of it, that his heart is burned to a coal." A burlesque on floral emblems.

Prices of Tulips.—The tulip trade of the Netherlands was at its height in 1634—5—6. One root called the *Viceroy*, was sold for articles valued at 2,500 florins, equal to 250 pounds sterling. The *Semper Augustus* sold for 2,000 florins; one person agreed to give 4,600 florins, with a new carriage, two horses and harness; and another agreed to give 12 acres of land, for a single root. This may seem very wild to us; but multicaulis and other speculations have existed nearer home.

Pruning.—It is said that the browsing of the goat gave the first idea of pruning the vine; and that the burning of a rose tree, causing it to sprout up afresh, led to the pruning of the rose.

Breathing Pores of Plants.—Plants are covered with a thin skin or epidermis, which is pierced with numerous invisible pores, called *stomates*, through which the plant breathes and perspires. In some plants there are as many as 70,000 of these pores to a square inch of the leaves; and the pores themselves, which are oblong or oval, are in some instances only the 2500th of an inch long.

Early Fruit.—A Mayduke cherry, trained against a south wall, and another tree of the same variety, in the open ground of a sheltered garden, were found, by J. Kyle, near Edinburgh, to differ a fortnight in the ripening of their fruit, the wall fruit being the earlier.

A Thundering Fountain.—The largest artificial fountain in the world is at Chatsworth, the seat of the Duke of Devonshire, England. It shoots up, almost like lightning, a column of water, 267 feet high, more than one hundred feet higher than Niagara Falls, and about 50 feet higher than the Bunker Hill monument.

Influence of the Moon.—Some of the ancient Romans, governed their gardening operations rigidly by the age of the moon. One author, quoted by Varro, says, "I observe these things, not only in shearing my sheep, but in cutting my hair, for I might become bald if I did not do this in the wane of the moon."

Pleasing Deceptions.—In Cardinal Richelieu's Villa at Ruell, according to Evelyn, at the end of a long walk, was "the arch of Constantine, painted on a wall in oil, as large as the real one in Rome, so well done, that even a man skilled in painting may mistake it for stone and sculpture. The sky and hills, which seem to be between the arches, are so natural, that swallows and other birds, thinking to fly through, have dashed themselves against the wall." Speaking of the residence of Count de Liancourt, the same writer says, "towards his study joins a little garden, which, though very narrow, by the addition of a well painted perspective, is to appearance greatly enlarged; to this there is another part, supported by arches, in which runs a stream of water, rising in the aviary, and seeming to flow some miles, by being artificially continued in the painting, where it sinks down at the wall."

Disagreeable Deceptions.—Contrivances for playing tricks upon visitors were common in princely gardens in the last century, by squirting water suddenly upon them from unexpected sources. In one case, a huge copper serpent, started up and moving round swiftly, shot from its mouth a shower on the spectators. In another, two musketeers [artificial] shot streams of water upon them from their musket barrels. In one of the finest gardens in England, visitors are suddenly treated with a ducking from the numerous branches of an artificial tree. Such low trickery is only fit for ill-bred school boys. More justifiable was the punishment inflicted on lawless curiosity, where a forbidden door was labelled, "Don't open this,"—and as soon as it was moved upon its hinges, a dashing shower bath came down from above.

Cucumbers.—The village of Sandy, Bedfordshire, has been known to furnish 10,000 bushels of pickling cucumbers in one week. Loudon says, "In March, cucumbers fetch in the London market a guinea a dozen; in August and September, one penny a dozen."

Use of Leaves.

We noticed, last autumn, the case of a plum tree, which lost all its leaves by leaf-blight, before the plums were fully grown, which continued stationary till a second crop of leaves came out, when their growth recommenced, and they subsequently acquired a fine, rich, honied flavor.

A quite different case, but illustrating the same principle, was reported by the late President Knight. "A peach tree in my garden, of which I was very anxious to see the fruit, had lost, by the severity of the weather. all its blossoms except two, which grew upon *leafless branches*. I therefore endeavored to derive the necessary returning sap [to mature the fruit] from another source. To attain this object, the points of the branches, which bore fruit, were brought into contact with other branches of the same age, which bore leaves; and a part of the bark, extending in length about four times their diameters, was pared off immediately above the fruit. Similar wounds were then made upon the other branches, with which these were brought into contact; the wounded surfaces were closely fitted and tightly bound together. A union soon took place; and the fruit, in consequence, acquired the highest state of maturity and perfection."

Varieties of Strawberries.

Eds. Cultivator—The correspondent of *The Horticulturist* at Poughkeepsie, does not do justice to the seedling strawberry of Mr. Hovey, but does more than justice to the Early Scarlet. He enumerates four varieties. The Early Scarlet is what we term staminate, or hermaphrodite. The other three pistillate, and not one of them, by themselves, would produce a perfect fruit. As the writer says nothing of the sexual character of the plants, I take it for granted that the poor Hovey was in a bed by itself, and so far from the Early Scarlet, as to admit of no intercourse, unless from a chance insect passing from the blossom of the one to the other. The Bishop and Hudson, as they bore better. were, I presume, in closer proximity. I would here remark, that I presume that the writer's Hudson, is not the true Hudson of Philadelphia, but the imported, necked fruit of Mr. Downing. The true character of the Hudson, will be discovered in a late publication of that veteran horticulturist, Mr. Landreth.

In Massachusetts, and in this state, and Kentucky. and wherever I have seen the Hovey, all the blossoms bear perfect fruit, where staminate plants are near, unless killed by frost. With us, some of its berries are larger than any other variety, measuring from 4 to 5½ inches, but its average size with us is less than the fruit of some others; never much exceeding the one half of the average size that Mr. Hovey claims for it in the vicinity of Boston; and from the silence of the Strawberry committee of the Boston Horticultural Society, I take it for granted that he does not err. With us, the season of its fruit is short, and the plants soon die out. Its size gives it deserved celebrity. We have two new seedlings, that promise to rival it in size, but it would not be safe to say so till we have had another year's experience. The Scarlet is, with us, among the best bearers of the hermaphrodite family, but will not produce with us, half the quantity of the Hovey, where planted adjoining. N. Longworth. *Cincinnati, Dec.* 15, 1848.

Preservation of Grafts.

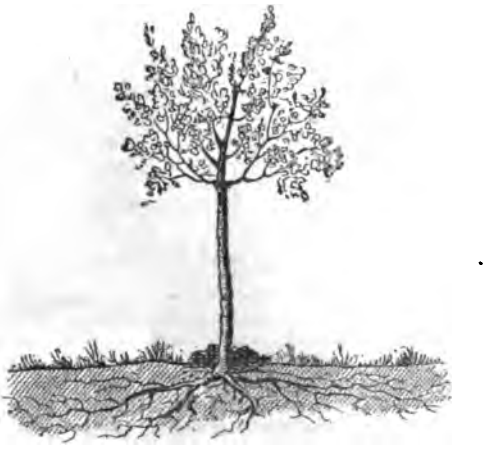
Eds. Cultivator—I have, during the past year, noticed several communications recommending the use of saw-dust for preserving scions. From my own experience, I find that it should be used with extreme caution, on account of its liability to heat, when a large quantity is used. A nursery firm with whom I am intimately acquainted, lost nearly their whole stock of apple roots and grafts, by packing them in sawdust during the past winter. I have found fresh loam, dug directly from the earth, much better than any other preparation for preserving grafts or roots, and every person engaged in this kind of work will find their operations more successful, the closer they stick to nature. Now in the way that grafts are usually kept, some become surfeited with water; others are shrivelled and dry, while others may happen to receive just moisture enough. The latter, if selected and set by themselves, will all be found to grow strong and healthy, which would not be found to be the case with grafts kept in a hap-hazard way, as is usually the case. When loam is used for keeping scions, it should be used bountifully, as it retains a more regular degree of moisture. I have sometimes wrapped bundles of grafts in newspapers, and afterwards buried them in loam, and they have kept in this way admirably; the paper seemed to absorb and retain just moisture enough from the earth to keep the scions in excellent condition. Isaac Hildreth. *Big Stream Point, Yates County, N. Y., Jan.* 2, 1849.

Quality of Melons in Central New-York.

Eds. Cultivator—Capt. M., of of the U. S. Navy, and at present a resident of this city, who lately doubled Cape Horn, and had frequent opportunities of eating melons in South America, says he saw none there equal to those raised in this city. So also, the Rev. Mr. K., once a resident of this city, but now an inhabitant of one of the Danish West India Islands, says that he has seen no melons in those Islands, equal to those he has eaten here.

Now why is this? Is it that our soil and climate are superior to theirs? Clearly not. The true explanation, undoubtedly, is this: Our short summers here are nearly tropical while they last. Melons therefore, that are forwarded so that they may ripen their fruit in the height of summer, mature their fruit under almost the same circumstances as in the tropics. This fact, connected with the superior care of our cultivation, secures a result which, at first, seems so very improbable. C. E. G. *Utica, Nov.* 1848.

Erratum. In the article on "Selecting Varieties of Fruit," after the words "900 different varieties," add, *of apples*. Also, in the same article, 2d column, 12th line, after the words, "TEN varieties," add, *of apples*.



Manuring Trees in Winter.

It does not always happen that the ground is made as fertile when young trees are set out, as it should be. In such instances, subsequent manuring is useful. No better season for this purpose can be selected than late in the autumn or during the winter, when rains or thaws may carry the soluble portions down among the roots, and the remainder be spaded in in the spring.

Now every person at all conversant with the laws of vegetable growth, is aware that the absorbing parts of roots, are the young fibres or spongioles, at or near the extremities of larger roots. In very small trees, these may be within a foot of the main stem; but as the tree increases in size, the circumference of the roots forms a larger and larger circle each successive year. While the tree is young, the length of the roots is usually quite equal to the height of the tree. As it becomes older, the roots near the base of the tree enlarge and become nearly destitute of fibres. Hence, the entire uselessness of the too common practice of applying manure closely around the base of the tree, instead of at a distance of many feet around. This practice is not less absurd than to pour water into a man's boots to allay his thirst.

Trees which grow in sod ground can never thrive so well as where the soil is kept mellow and free from vegetable growth. With young trees, the difference will often be as *ten to one*. Many, to avoid this evil, spade around their trees, but in so small a circle, that no benefit is derived; the young roots are far off from the tree and from this spaded circle, seeking, in a hard and dry soil, under the thick grassy covering, for a scanty supply of food.

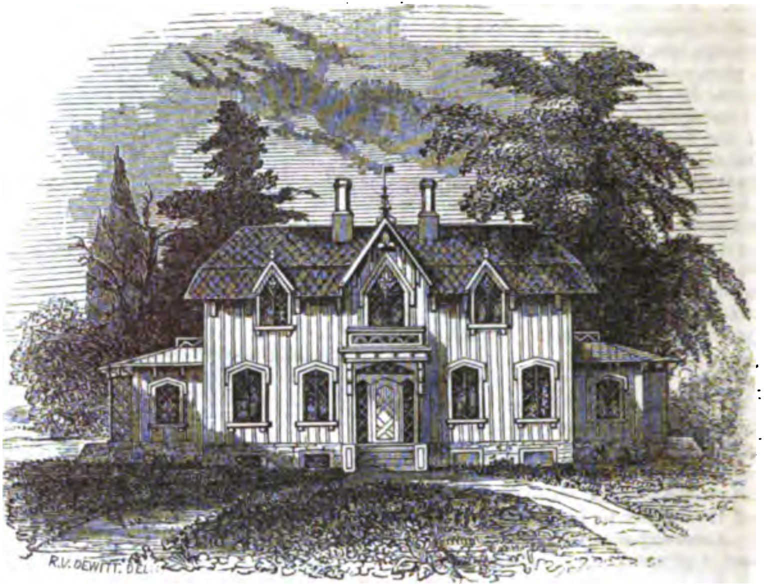
The above figure is intended to exhibit these errors, by showing how far from the effective reach of the roots, is the mound of manure or mellow soil at the foot of the trunk.

Apples for Canada.

Would it be advantageous to plant apple trees, to feed the apples to hogs, in a cold part of Canada, where land is cheap, and labor pretty high? In the affirmative, what kinds are considered best, for productiveness and hardihood? Will any of your correspondents answer? A. *Montreal, Dec.*, 1848.

Pear buds on Quince.

Good Growth.—In the summer of 1847, I put two pear buds in a quince stock—they both took—spring of 1848, headed down. They are now each 5 feet 1 inch high, and about ¾ inch in diamter. J. Bunch. *Chuckatuck, Va*

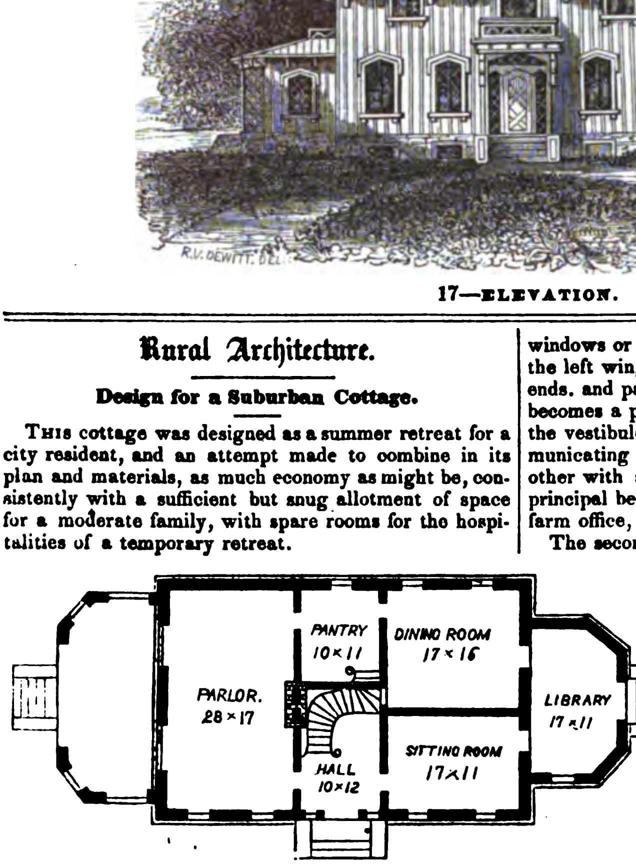

R.V. DEWITT. DEL.

17—ELEVATION.

Rural Architecture.

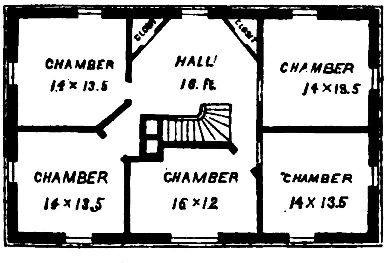
Design for a Suburban Cottage.

This cottage was designed as a summer retreat for a city resident, and an attempt made to combine in its plan and materials, as much economy as might be, consistently with a sufficient but snug allotment of space for a moderate family, with spare rooms for the hospitalities of a temporary retreat.



18—FIRST FLOOR.

There is on the principal floor—an entrance hall or vestibule of 10+12 feet, exclusive of the stairs to the upper story and basement. From this vestibule to the right, you enter a room 17+11, to be used as a sitting room, or as the principal bed-room. To the left, you enter a large parlor, 28+17 feet, opening by two large windows or glass doors, upon a veranda, which forms the left wing of the house; which being closed at the ends, and partially enclosed in front with lattice work, becomes a pleasant summer apartment. In the rear of the vestibule is a spacious pantry, 10+11 feet, communicating with the parlor on one side, and on the other with a dining room, 17+16 in the rear of the principal bed-room. The right wing is for a library or farm office, and is 17+11 feet.

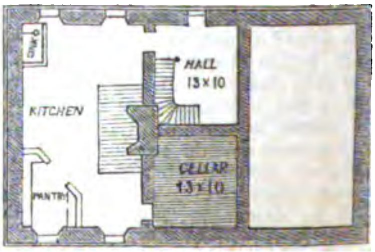


19—SECOND FLOOR.

The second floor furnishes four bedrooms, 14+13½ ft. each and another of 16+12—besides a hall or lobby of same size, with linen closets taken off its angles.

The basement plan shows a vestibule 13+10 feet, with a cellar of same size back of it. A kitchen extending under the parlor, and a corresponding room at the other end of the building, to be divided at will, and may have one or two bed-rooms for domestics partitioned off in it, besides spare cellar room.

Parlor, dining room, pantry, six bedrooms of good size, besides basement. Sufficient room for a citizen's box. If the building is to be a farm-house proper, then the disposition of the lower rooms can be changed to suit the case.



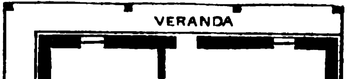
20—BASEMENT.

As shown in the elevation, the design is for an edifice with stone foundation and wooden frame, with boarding placed vertically, tongued and grooved, and the same covered with a ribbon or strip—(as in Design V. of Downing's Cottage Residences, 1842.) The roof to be made with a double pitch—the eaves to project well from the line of the wall, and to be supported and ornamented by brackets. The chimney to be finished with ornamental shafts, and the usual cheap but tasteful devices to be employed in giving a tasteful and picturesque appearance to the building, such as cutting the lower edges of the shingles in semi-hexagons, surmounting the dormer windows with acorns or fleur-de-lis—placing a balcony over the entrance door, and balustrades on the roof of the wings; as suggested by the print of the elevation.

I have not made a proper estimate of the expense; but by referring to *Downing's Cottage Residences*, Design IV., I find that the amount of material and work is about equal in that case, to the above building. Allowing for a little extra work as to style and finish, say $2,200, and if built of brick, with more elaborate ornament, say $2,500. R. V. De Witt. *Albany*, 1849.

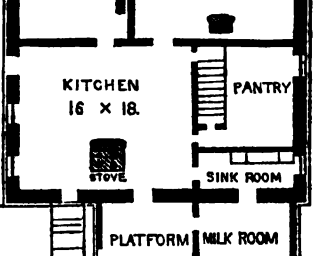
Poor Man's Cottage.

Eds. Cultivator—This house is to be 27+34 feet, one story and a-half high, or high enough to admit of those little attic windows, coming within three feet of the floor. The rear can be as large as is deemed necessary. A room is taken from the woodhouse, which will be nice to set milk in, in summer, and very convenient to keep fresh meat in the winter, and many other provisions which cannot be well kept in a warm pantry. I should, of all things, like a pantry thus situated.



24—First Floor.

Adjoining this is a place to wash, and make cheese in, during the summer, and to keep tubs, pails, baskets, mops and brooms—then the sink-room to wash dishes in, handy to the stove. There can be an opening between the sink room and pantry, to put the dishes through, which will be a great convenience. A stone should be placed under the cook-stove in the same manner that hearth stones are laid, level with the floor.



25—Second Floor.

If the veranda should be only in front, it would give the house a lenghty unpleasant appearance; by placing it around the side, it will improve the looks very much, and ought to be there to cover the door, opening into the kitchen—also to make it more pleasant in summer. After all, the shape of a house, depends much on the site, whether it be on an eminence, a side-hill, or on low level land—much also, is depending on the purse, whether it be deep or shallow. A Farmer's Wife. *N. Y.*

Sheep Husbandry.

How do flocks of Sheep Run Out?

Editors Cultivator—The opinion is quite prevalent among farmers, that flocks of sheep, that are several years confined to one locality, deteriorate, or as frequently expressed, " run out."

That flocks do sometimes deteriorate when confined to one locality, I do not doubt; but when such an event actually occurs, I apprehend it would be quite as judicious, and would quite as effectually restore the health and vigor of the flock, to dispose of the *proprietor* and retain the *sheep*, as vice versa. That this running out is owing to bad management, and *not* to any other local cause, I have no doubt, and it may be mainly included under two heads: First, in *breeding;* secondly, in *feeding*.

The system of close, or " in and in " breeding, beyond a given point, and that point not *very* remote from the starting point, I believe to be very injurious to constitutional vigor. But as the question has been discussed in your columns, I will not now enter into the argument.

Constitutional vigor in sheep, as well as in other animals, I regard as being of paramount importance; without it, light fleeces, deformity and disease, are constant attendants.

The form of a sheep should be as much the object of care and solicitude as the form of a horse; while the former with many is scarcely noticed, with the latter it is almost the only criterion of value. Who would undertake to say that a long-legged, thin-shouldered, narrow-chested, slab-sided, loose-jointed horse is possessed either of constitutional vigor or hardihood? Indeed, such an animal would be considered by every one as comparatively, if not utterly valueless; while thousands retain sheep equally faulty, from which to propagate, and at the same time, the well-shaped, the vigorous and hardy, which from these circumstances have a tendency to fatten, are sacrificed to the drover and the butcher's knife. Great care should therefore be taken not only in selecting *bucks* but breeding *ewes*. We should look at the *whole* sheep—should have an image of perfection in our minds, and make every selection with a view to attain that object. It is not texture of fleece or weight of fleece, or symmetry of form, separately considered, but the combination of the greatest number of desirable points and qualities.

The question arises in this connexion, how shall we dispose of the refuse of the flock? I answer, a separation should be made soon after shearing; the choice lambs and breeding ewes, intended for preservation, should be put into good pastures; no buyer or butcher should be allowed to look " over " into their enclosure. The refuse, or those devoted to *destruction*, should be placed, if possible, in better pasture, and should be fed for a month or two in the fall, with corn or meal, or with turneps, until fit for slaughtering.

As sheep increase in numbers, on a given number of acres, other things being equal, the amount of food per head, of course diminishes. What would fully feed fifty, might barely subsist seventy. Now let us look at the comparative profits. Good keep and poor keep will make at least one pound difference in weight of fleece. Say 70 head at 2½ lbs. per head, 70+2½=175 lbs —50 head at 3½ lbs. 50+3½=175—making weight of fleeces equal. Loss by *winter-killing* on account of poverty, from the 70 poor sheep, say 10 head; 50 in good condition, *no loss*. The account now stands 50 to 60. The *increase* from 50 good sheep would doubtless be greater than from 60 poor ones; besides the wool account would now foot up 25 lbs. in favor of the good conditioned sheep. So that *well fed*, as well as WELL BRED, should be the wool growers' motto.

Sheep are large feeders, and require, especially in winter, much care. Large flocks should, particularly at that season, be divided into smaller ones, not to exceed fifty or sixty in each; the weak, and the strong, and the small and the large, being kept in separate parcels.

They can then receive care and feed severally, according to their respective conditions. A sheep in good condition, has a better appetite and will consume coarser food than one which is poor; but if suffered to run together promiscuously, they will crowd away the weaker ones, and appropriate to their own use the choicest of the food. Wool grows much faster in winter than in summer, therefore, as wool is formed or made of *feed*, and not of air, as some seem to suppose, it is necessary that keep and care be increased accordingly. Otherwise there will be an inevitable "falling away,"—the fat and muscle previously acquired, will waste away to supply the growth of wool.

During the next twenty years, the western part of Virginia, the state of Ohio, the hilly portions of Kentucky and Tennessee, with perhaps Indiana and Michigan, are destined to be the great wool regions. The east cannot compete with us in this article; but will find more profit in the products of the dairy, beef, mutton, and the coarser grains. CHAS. R. SMITH. *Solon, O.*

Different Species of the Ox.

The Gayal, Zebu, and Italian Ox.

In addition to the different species of the ox mentioned in our last, there are several others which it is proper to notice before we proceed to speak of the domestic races of Europe and America.

The *arnee* is a species of wild buffalo found in Bengal, and other parts of India. Its most striking characteristic is its enormous upright horns, which often measure from four to six feet in length.

Another wild species called the *gour*, inhabits the mountain districts of Central India. It is described as being nearly six feet high at the withers, with very clean-made and vigorous limbs, resembling in this respect, the deer rather than the bovine tribe. The color is brownish black, almost approaching bluish black. The hair is short, having the oily appearance of fresh seal skin.

The *yak* or grunting ox—*Bos grunniens*—exists in Tartary, both in a tame and wild state. It is, comparatively, of small size, covered with a profuse quantity of long hair, of a chocolate brown color. It does not *low* like the common ox, but only utters, when uneasy, a low grunting sound. It inhabits the coldest mountains and bleakest plains of Thibet. Its skin affords a comfortable covering for the inhabitants of those regions, and its flesh is used as food. The milk of the female, in a domestic state, affords butter, which is said to be of superior excellence. It is the custom of the people to preserve the butter in skins or bladders, in which state, being excluded from the air, it will keep in that cold climate for a year or more.

The common buffalo—*Bos bubalus*—is believed to be distinct from any species before mentioned. It is found in a semi-domesticated state in various parts of Asia, in northern and eastern Africa, and in southern Europe. In Sumatra, and in the forests of Abyssinia, it is found wild. It is used for labor in many countries, and the milk and flesh of the cow are used for food.

The *gayal*—*Bos frontalis* of Linneus—(fig. 26,) is found in southern Asia, both in a wild and domestic state. In general characters, this race more nearly approaches the domestic ox than any before noticed. The male is said to resemble our common bull in shape and appearance. It is of a blackish brown color; the horns short, thick and strong. He is naturally very bold, and will defend himself against any beast of prey—even against the tiger. In a domestic state it is used by the natives for tilling the ground, and is said to be more tractable than the buffalo. Travelers state that the cow is very quiet and is used for all purposes of the dairy, and the milk is said to possess a peculiar richness, which is supposed to be owing to the animals feeding on the young shoots and branches of trees, in preference to grass. Though generally considered specifically distinct from the zebu and from our common cattle, it is so nearly allied as to breed with both, and the offspring, in both cases, are fertile.

26—WILD GAYAL, OR JUNGLY GAU.

The *zebu* or humped race of India, (fig. 27,) is characterised by "narrow, high withers, surmounted by a large fatty hump; an arched back, rising at the croup, and then descending suddenly to the tail; slender limbs; a large pendulous dewlap, falling in folds; long, pendant ears, and a peculiar mild expression of the eye." The race is described as varying in size from that of our largest cattle, to a dwarf and often hornless breed, not exceeding a young calf in stature." The race is not confined to India, but is found in China, the Indian islands, on the eastern coast of Africa, and in the island o Madagascar. In ancient times it existed in Egypt.

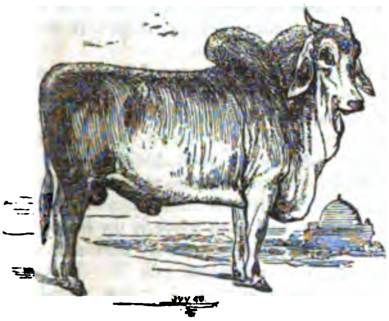
Naturalists are not entirely agreed as to the question whether the zebu is a distinct species from the common ox. Cuvier regarded the races as identical. Martin, on the contrary, is inclined to believe them distinct. In support of the idea that the zebu has sprung from an original type, he cites the extreme antiquity of the race, and observes that from the earliest ages it has been an object of veneration in India—that it is found carved on the oldest temples—that its figure is found on the tombs of Thebes, and on the sculptured remains of Egyptian antiquity, which are traceable two thousand years before the christian era, the characters presented being the same precisely, as those possessed by the animal at the present day.

An additional evidence of the distinctness of the zebu, from our common cattle, is its voice, which approaches more to a grunt than the lowing of our kine. The races also differ in style of coloring.

It is admitted, however, that the zebu will interbreed with our common cattle, and that they produce a fertile progeny; but a similar result not unfrequently occurs with distinct, though nearly allied species.

The zebu has been in several instances introduced into Europe, and we have known of one importation having been made to America. The late **Gorham Parsons**, Esq., of Brighton, Mass., had several individuals of this race, which we recollect having seen on different occasions, at his farm, and also at the cattle shows formerly held at Brighton. The bull resembled the cut here given. The cows were smaller than the bull, and had a less prominent hump. Mr. P. reared a pair of steers of this race; and we believe he made some crosses between the bull and cows of different breeds. It is many years since we saw any of these cattle. We think it probable that none of their descendants are in existence. Perhaps some one can tell us their history.

The large zebu is much more active than any of our common cattle. It is used in India for various agricultural purposes, as well as for carrying burdens, and for the saddle. The bulls are used for carrying military dispatches. It is said "they will travel with a soldier on their back, fifteen or sixteen hours in a day, at the rate of six miles an hour. Their action is fine, and they bring their hind legs under them in as straight a line as the horse. Such is their activity that they can clear a five-barred gate with ease."



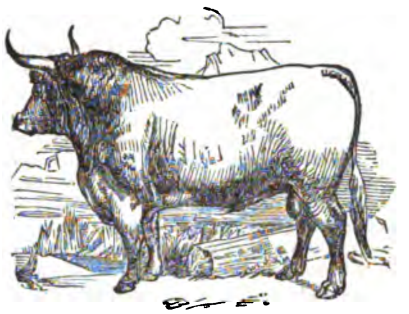
27—LARGE ZEBU OR BRAHMIN BULL.

The Domestic Ox—*Bos taurus*.—From the preceding notices which have been given of the different species of the bovine tribe, it will be perceived that none of them, except, perhaps, the Asiatic gayal, can be regarded as identical with the domestic ox, and the most reasonable conclusion is, that the latter had an origin distinct from any before described. Though almost every country of the globe appears to have possessed one or more indigenous species of the ox, yet it is difficult, or we might say impossible, to name the natural locality of the domestic race, or to say where its domestication was first effected. But, as observed by Martin, whatever may have been its native country, "this most valuable animal has spread with the spreading of nations; it is universal over Europe and Asia, except within those icy regions where the rein-deer supplies its place; its range extends over the whole of Africa and the great island of Madagascar; and within modern days it has been introduced from Europe into the vast continent of America, and the islands of the southern ocean. In these new regions it has multiplied excessively, and herds roam the plains in a state of semi-wildness. South America owes the ox to the Spaniards; the earliest imported, according to Azara, were Andalusian. Captain John de Salazar, born in the city of Pomar, in Arragon, carried over seven cows and a bull to the coast of Brazil, whence they were transported by the rivers Paranay and Paraguay to the city of Assumption, in 1546, several months being occupied in their transport. From this stock sprung the feral cattle of the extensive Pampas, of which so many travellers have given most interesting descriptions."

Naturalists are agreed, however, that notwithstanding the great diversity presented by the domestic ox, and the various breeds into which it has ramified, from the effects of treatment, food and climate, it is every where specifically identical. Still the peculiar characters of the different breeds, are in many instances quite striking, and show that a long period of time has elapsed since they were subjected to the influences of domestication.

In noticing, as we propose to do, the various breeds of cattle, it is proper to begin with those which seem to have made the least departure from the primitive type.

In Italy a fine race of semi-wild cattle exists in the Campagna of Rome, (fig. 28.) Martin observes that many of the bulls are "models of beauty; such, indeed as the sculptured figures of antiquity portray with spirit and fidelity." They are described as mostly white, or grey tinged with brown; the horns large, well turned and pointed. The bulls, which are very fierce, are employed in the bull-fights of the amphitheatre of Rome—the noble animals being kept, says Martin, "in the vaults which once held the ashes of the Imperial Cæsars!"



28—BULL OF THE CAMPAGNA OF ROME.

It is this breed to which Mr. D. G. **Mitchell**, under the signature of "Caius," alludes, in *The Cultivator* for 1847, p. 46. He says: "The oxen are large, deep-chested, well-formed, light-grey beasts, with enormous horns, spreading from 3 to 4 feet; and are said to have sprung from that famous breed of white cattle, which history and romance alike assign to the beautiful valley of Clitumnus. They have not the square, butcher make of the Herefords and Durhams; but taking into view their soft, fine haired skins, their large, intelligent eyes and their branching horns, I have never seen handsomer cattle in any part of Europe."

It has been conjectured, and the idea is not improbable, that some of the present breeds of Great Britain, including the semi-wild stocks of Chillingham and Chatelherault parks, were derived from this ancient Italian race, which in remote times is believed to have extended over a large portion of Europe and parts of Asia, and may have been carried to the British islands by some of the early inhabitants, of whose history we have no knowledge.

The cattle of Tuscany appear to have considerable affinity with this Roman breed. They are spoken of by travelers as of fine shape and appearance. And in Hungary there is a breed of white or whitish cattle, of large size and with long horns, which may be identical with that of the Campagna. It appears to be a breed of superior character. Mr. **Fleischmann**, in his remarks on the agriculture of several European countries, (Report of the Commissioner of Patents, 1847, p. 344,) observes: "Among all the horned races of Europe, there is none which, with an equally collossal frame approach so nearly the speed of the horse, as do the Hungarian oxen. It is a race, which by their high and stately growth, their long horns, nearly six feet in length, their proud and bold look, their broad breast and handsome white color, changing slightly into blue, and lastly, the beautiful proportions of all their parts, may fairly be pronounced one of the most useful and handsomest productions of generating nature."

In our next, we shall commence notices of the British breeds, and shall speak of those that have been introduced to this country.

The Veterinary Department.

Diseases of Horses.

Ringbone.—Ringbone usually commences about the pastern-joint; but as it spreads rapidly it soon involves not only the pastern-bones, but the cartilages of the foot. According to Youatt, when the first deposit is on the lower pastern, and on both sides of it, and produced by violent inflammation of the ligaments of the joints, it is recognised by a slight enlargement, or bony tumor on each side of the foot, and just above the coronet. This is more frequent in the hind than in the fore foot, because, from the violent action of the hind legs in propelling the horse forward, the pasterns are more subject to ligamentary injury behind than before; yet the lameness is not so great, because the disease is confined principally to the ligaments, and the bones have not been injured by the concussion; while from the position of the fore limbs, and their exposure to concussion, there will generally be in them injury of the bones to be added to that of the ligaments. In its early stage, and when recognized only by a bony enlargement on both sides of the pastern-joint, or in some few cases on the one side only, the lameness is not very considerable, and it is not impossible to remove the disease by active blistering, or by the application of the cautery; but there is so much wear and tear in this part of the animal, that the inflammation and the disposition to the formation of bone rapidly spread. The pasterns first become connected together by bone instead of ligament, and thence results what is called an anchylosed or fixed joint. Its motion is lost. From this joint the disease proceeds to the cartilages of the foot, and to the union between the lower pastern and the coffin and navicular bones; and the motion of these parts is likewise impeded or lost, and the whole of this part of the foot becomes one mass of spongy bone. From this disposition to spread, and at first around the pastern-joint, which is situated just above the coronet, the disease has acquired the name of ringbone.

Wind-Galls.—Horses which are subjected to hard service are liable to have what are called wind-galls, on those parts of the limbs which are most exposed, especially about the hock and upper pastern-joints. The affection is an undue enlargement of little bags or sacs which are situated in the parts named. By the straining of the tendons, these sacs become injured, and sometimes take on inflammation, and become hard. Youatt says—"The farriers used to suppose that they contained wind—hence their name wind-galls; and hence the practice of opening them by which dreadful inflammation has often been produced and many a valuable horse destroyed." As to treatment, the author just referred to directs, "if the tumors are numerous and large, and seem to impede the motion of the limb, they may be attacked first by bandage. The roller should be of flannel, and soft pads on each side of the enlargements, and bound down tightly upon them. The bandage may be wetted with a lotion composed of 3 parts of vinegar to one of spirits of wine. The wind-gall will often diminish or disappear by this treatment, but will too frequently return when the horse is again hardly worked. A blister is a more effectual remedy, and firing still more certain, if the tumors be sufficiently large and annoying to justify our having recourse to measures so severe. In bad cases, the cautery is the only cure, for it will not only effect the immediate absorption of the fluid, and the reduction of the swelling; but, by contracting the skin, will act as a permanent bandage, and therefore prevent the re-appearance of the tumor."

Domestic Economy, Recipes, &c.

[From Miss Beecher's Domestic Receipt Book.]

Roasted and Baked Meats.

General Remarks.—Be sure you have your spit and tin oven very clean and bright, and for this end wash them, if possible, before they get cold. If they stand, pour boiling water on to them.

Have a fire so large as to extend half a foot beyond the roaster each side.

When meat is thin and tender, have a small, brisk fire. When your meat is large, and requires long roasting, have large solid wood, kindled with charcoal and small sticks. Set the meat, at first, some distance from the place where it is to roast, so as to have it heat through gradually, and then move it up to roast.

Slow roasting, especially at first, and still more for large pieces, is very important.

Allow about *fifteen minutes* for each pound of most kinds of meat, and if it is cold weather, or the meat fresh killed, more time is required, probably twenty minutes for each pound.

When the meat is nearly done, stir up the fire to brown it. The meat should be basted a good deal, especially the first part of the time.

Let meat be spitted so as to be equally balanced. When the meat is nearly done, the steam from it will be drawn toward the fire.

A pale brown is the proper color for a roast.

Some dredge on flour and baste, a short time before roasted meats are done.

Whenever fresh lard is used instead of butter, in the dripping pan, or to rub on meats, more salt must be used.

Flour thickening in gravies must be wet up with very little water till the lumps are out, and then made thin. Never dredge flour into gravies, as it makes lumps. Strain all gravies.

Roast Beef.—The sirloin, and the first and second cuts of the rack, are the best roasting pieces.

Rub it with salt; set the bony side to the fire to heat a while, then turn it and have a strong fire; and if thick, allow fifteen minutes to the pound; if thin, allow a little less. If fresh killed, or if it is very cold, allow a little more. Half an hour before it is done, pour off the gravy, thicken it with brown flour, and season it with salt and pepper. It is the fashion to serve roast beef with no other gravy than the juice of the meat.

To Roast a Spare Rib.—Rub with salt, pepper, and powdered sage. Put the bone side to warm slowly. Dredge on a little flour, and put a little salted water and butter into the dripping-pan, and baste with it. If large, it requires three hours; if small, only one to cook it. Pork must be cooked slowly and very thoroughly.

Roast Turkey.—Wash the outside and inside very clean. Take bread crumbs, grated or chopped, about enough to fill the turkey, chop a bit of salt pork, the size of a good egg, and mix it in, with butter, the size of an egg, pepper, salt, and sweet herbs to your taste. Then beat up an egg and work in. Fill the crop and the body, sew them up, and tie the legs and wings, and spit them. Set it where it will gradually heat, and turn it once or twice, while heating, for fifteen minutes. Then put it up to the fire, and allow about twenty-five minutes for each pound. Turkey must be cooked very thoroughly. It must roast slowly at first, and be often basted with butter on a fork. Dredge it with flour just before taking it up, and let it brown.

Put the inwards in a skillet to boil for two hours, chop them up, season them, use the liquor they are boiled in, for gravy, and thicken it with brown flour, and a bit of butter, the size of a hen's egg. This is the giblet sauce. Take the drippings, say half a pint, thickened with a paste made of a tablespoonful of brown or white flour, and let it simmer five minutes, and then use it for thin gravy.

The Farmer's Note-Book.

Hints as to Wintering Stock.

Eds. Cultivator—The season of the year has now arrived, when all our stock, must depend wholly upon our care and feeding. Have you got more than you can winter well? If so, sell off until you are sure that you have no more than you can winter, so as to have them in good condition in the spring.

All young animals should be kept steadily growing, winter and summer, from the time they are dropped, until they have grown to full size, and all their qualities are properly developed; not stuffed or pampered at any time, so as to cause an unnatural growth; but let it be uniform and continuous. All animals, whether old or young, should be kept in uniform good condition the year round. If they are suffered to run down during the winter, and come out poor in the spring, it takes some two months, say from the middle of April till the middle of June, to bring them up to the condition they were in the previous fall; and frequently their constitution becomes so impaired that they never get fairly over. This rule holds good with reference to all kinds of stock, whatever may be the uses for which they are kept, or intended. There is no rule which accords better with good economy, and natural principles, than that we should keep no more stock than we can keep well. This will prove profitable to the farmer, and comfortable to his stock. Farmer. *Columbia, N. Y.*

Profits of Farming.

Eds. Cultivator—Nothing in your paper which I have read, during the past three years, for which I have been a subscriber, has interested me more, than your descriptions of farms in this and other States; and the statements made by farmers themselves, of their own experiments, profits and expenses in the different branches of their business.

And I think it would be profitable, as well as interesting, to most of your readers, if some of the real, practical and working farmers would keep correct accounts of their business, and make and publish statements in *The Cultivator* of their incomes and expenses in the various localities, and in all the different branches of husbandry. Such statements should contain the amount of capital invested, the proximity and facility to market, and particular branch carried on. By comprising these statements, we might make some estimate of the relative value of farms at different places, and also, of the various degrees of profitableness of the various branches and modes of management.

My farm is situated in the town of Sidney, Delaware county, N. Y., and contains about eighty acres, sixty of which are improved, or beginning to be improved. A section of it, divided from the rest by a small creek, is a low flat, and has been mowed some thirty or forty years in succession. This piece contains about eighteen acres. Another piece of twenty acres is nearly level, and suitable to plow, though somewhat stony. I have a few acres of pasture that never was plowed, being rather wet, and some side hill too steep to till conveniently. I mowed the past season eighteen acres; about six acres were under the plow, and the remainder was in pasture.

I bought my farm in 1845, for $1,300, and this is the second season I have occupied it myself. A part of my pasture produces but little, on account of the briars with which it was overrun, when I purchased, and which I have been unable to subdue yet. My principal business is making butter. I kept the past season, five four year old heifers, and seven cows—twelve in all. I also kept one horse, fifteen sheep, and a yearling bull. I live one hundred miles from Catskill, the nearest market or shipping place. I sold my butter and pork at my own house.

Sold at my own house, 2,000 lbs. butter, at 16¼ cts. per lb,		$325 00
do. Pork, 1,000 lbs. at 4½ cts.,		45 00
do. 50 bushels oats, at 31¼ cts. per bush.,		15 62
do. 30 " corn, at 50 " ",		15 00
Calf skins,		5 00
A calf,		3 00
A yearling,		6 00
7 tons hay, at $6 per ton,		42 00
Wool, poultry, eggs, tallow, hides, &c., &c., to the amount of,		50 56
Sold,		$507 18
Merchants', grocers' and mechanics' bills amount to,	$91 07	
Paid help in the house,	23 00	
" on the farm,	25 00	
Expenses,		$139 07
Profits,		$368 11

In the foregoing account I estimated only the produce I actually sold, making no reckoning of what was consumed in the family, consisting of four persons. My stock now is about the same as at the beginning of the year. From my seven cows and five heifers, I sold two thousand pounds of butter, besides what my family used in one year, which is not far from three hundred pounds; making in the whole, 2,300 hundred pounds. If my cows had been all of mature age, they would have averaged 200 lbs a piece. My feed in the summer is common pasture—in the winter it is good hay, with roots or provendor of some sort, just before and after calving. My cows are all of the common or native breed, and generally small size. Sluman L. Wattles. *Sidney Centre. Del. Co., N. Y. Dec. 26, 1848.*

Maple Sugar, Indian Corn, &c.

Eds. Cultivator—I propose to offer a few remarks and suggestions, on various subjects connected with the object of *The Cultivator*, and should they prove of service to any of your numerous readers, it will be a sufficient compensation for the labor of preparing them.

Sinking Rocks—Many farms are encumbered to some extent with rocks of various sizes, sprinkled about and causing great inconvenience to the plowman. Blasting is frequently resorted to for their removal. Some rocks, however, are so hard as almost to bid defiance to the drill; and besides, this method is attended with some expense, and not wholly without danger. Having been in the practice, for many long years, of encountering these obstacles, I resolved to dispose of them by the sinking mode—that is, to dig a pit by and partly under the rock, sufficiently deep and broad, so that when tumbled in, the plow can freely pass over it.

I disposed of quite a lot of these incumbrances, with the aid of another hand, in a single day, thus "enlarging the area," without "extending" it, and subsoiling, in one instance, to near the depth of seven feet.

Maple Sugar—I do not intend here, to speak of the best way of producing this article in its purity. That has often been done through your columns by those better qualified than myself. The object is to induce those having the *means*, to *make* it. Many farmers, having abundance of the sugar maple, object to engaging in this business, alleging that the sale of the fuel necessary for its manufacture, would purchase an equal amount of sugar, ready made. I am quite certain that my own experience, for a series of years, has resulted in a different conclusion. Take the last season for an example. About 40 barrels of sap were boiled, consuming nearly three cords of refuse wood, chiefly bass and hemlock, and producing about 80 pounds of sugar and 16 gallons of molasses. Estimating the sugar at ten cents a pound, and the molasses at 50 cents a gallon, and the sales were all made at a higher rate, the amount is $16. The wood used could hardly have been sold for three dollars. My apparatus for boiling is not the most economical, being a cauldron set in brick, in connexion with a five pail kettle, with a spiral flue around the whole. A large sheet-iron pan is said to be far preferable, by exposing a much larger surface to the fire, by which the evaporating process is greatly expedited. A small building, contiguous to my dwelling, contains my boiling apparatus, and sufficient space for nearly two years' supply of fuel, consisting of old rails, stumps, and parts of logs too knotty or tough to be reduced for the stove, all gathered in the previous season so that when sugar time comes, half the fire may not be required to fry away the sap *outside* the kettles. A one horse power is used for gathering, and when the "run" is over, the buckets, &c. are carefully stowed away in an upper loft, ready for the "bush" again on return of spring. It has been recommended to plug the trees, to facilitate the healing process. I have tried it one or two years, and the effect was evidently bad, and long since abandoned it. But not to protract these remarks; let those who have not yet drawn any portion of their sugar from the maple, be assured that this home-made luxury is not less *sweet*, albeit there may be less *sweat* in the manufacture of it, than in the more common product of the cane.

Quantity of seed per Acre—The proper seeding of land is worthy the careful observation of every farmer. To ascertain the amount of seed in any given case, best adapted to produce the greatest yield, is necessary to successful cultivation. Such, however, is the diversity of soil, fertility and climate, together with various other circumstances, that no rule, universally applicable, can be laid down. Perhaps in regard to this subject, as well as many others, it may be said that "truth lies between extremes." "Sowing sparingly has been condemned by high authority, and its practice is doubtless far more pernicious than its opposite. Suppose a certain field is designed for oats the ensuing year—let a part be seeded at the rate of 2 and another part at the rate of 2½, a third part at the rate of 3 bushels per acre; the result would most likely indicate the proper quantity of seed per acre for that locality. For the above crop, I have usually sown 3 bushels per acre, a less quantity not appearing to fully occupy the ground.

Planting Corn—With respect to corn, I have generally planted in rows both ways, at a distance of about 3 feet. Last year the rows were 3 by 2½, and the present year at least 3 by 4 feet; the land and cultivation about the same in both years, and the seasons favorable. In the first instance, the yield was less than in the last, taking any given number of hills, but much greater in the aggregate, both in grain and fodder. The first contained about 5,136 hills; the latter, 3,627 per acre. The land was capable of sustaining the largest number and the trifling additional labor of tillage when the ground is fully occupied, is not to be compared with the greater yield. But the greater value of the crop, generally obtained in consequence of thorough seeding, is not the only beneficial result. Noxious weeds, to a great extent, are prevented from taking root and maturing their pernicious seeds, which in some fields appear to have already won the victory over the less spontaneous but more legitimate and valuable products of agriculture.

Pasturing Highways—The practice of some farmers, of pasturing the highway, has several times been alluded to, and condemned by your correspondents, as well it should be. It is a bad business all round—for the owners, usually a profitless one, as the time spent in search of the animals is hardly to be compensated by all the pickings and stealings obtained abroad. And to those frequently harrassed by these unwelcome visitors, it is truly vexatious—an infliction which no man ought to inflict upon his neighbor. It has been, and perhaps still is, supposed by some persons, that certain animals are "free commoners," as they express it, and from indications not to be mistaken, the *animals themselves* apopt this belief to an unlimited extent. Now, Messrs. Editors, I wish to make a suggestion, and will then close these remarks. It is this—that at the ensuing town meetings, the presiding officer be requested to state briefly the law on this subject, as there is evidently some lack of information in the community in regard to this matter. G. Butler. *Clinton, N. Y., Dec.* 20.

Substitute for the Potato.

Eds. Cultivator—As the potato disease is very severe, causing the complete failure of the crop on many farms in this neighborhood, I wish to call your atten- to an article I take from the New-York *Sun* of Nov. 4, 1848.

"*Rival of the Potato.* M. Piquot Lamarre has been sent out to the United States, in order to collect specimens of the newly discovered vegetable, a species of Picotiana, for the purpose of introducing it into France. It is considered superior to the potato, being more delicate, and at the same time, more nutritious."

I have seen no account of such a vegetable in your paper. Will you explain to your readers the character and quality of said vegetable, and in what part of the United States it may be found? C. Huntington.

We know nothing of the vegetable alluded to, but insert the communication of Mr. H., for the purpose of bringing out further information on the subject.—Eds.

Large Crop of Wheat.

The last summer we harvested 240 bushels of wheat on 5¾ acres, weighing 62½ lbs to the measured bushel. The land upon which the wheat was raised, had been in pasture some six years, previous to March, 1847, at which time it was plowed, and sowed with oats. The oats were harvested in July following, and were only a tolerable crop. The oat-stubble was almost immediately plowed under about seven inches deep, a dressing of well rotted manure and ashes, (mixed) was then put on, after which it was again plowed about six inches deep, with two horses, so that the stubble was left in a great measure undisturbed by the second plowing, (although it was so much rotted as not to be much in the way.) The second plowing, about the 24th of September, was followed by the subsoil plow, drawn by two horses, loosening the ground under the stubble to the depth of five or six inches. The ground was harrowed once before the wheat was sowed and twice after. On the 5¾ acres, about sixteen bushels of wheat were sowed. The variety was procured from Mr. John

Hunter, of Lycoming Co., Pa., and is there known by the name of the *White Blue Stem*. It is a white, smooth wheat

It may not be amiss to remark that a portion of the 5¾ acres, was before this treatment, an unproductive, clay hill side, much washed and gullied, and in fact the whole field was very uneven and hilly; but the earth being loosened to so great a depth by the subsoil plow, all the water that fell on it was retained, so that it did not wash, and notwithstanding the heavy rains of last winter, the face of the ground was completely unbroken. JAS. L. COX. *Zanesville, O.*

Commerce of the New-York Canals.

The following valuable tables in regard to the amount and value of produce received at tide-water through the New-York canals, during the years 1846, 1847 and 1848, were prepared for the *Albany Evening Journal*, from the official reports of the collector's offices at Albany, West Troy and Waterford. The information embraced is of a kind which renders the tables worthy of preservation for future reference.

STATEMENT showing the total quantity of each article which came to the Hudson River on the New-York Canals, during the years 1846, 1847, and 1848:—

THE FOREST.	1846.	1847.	1848.
Fur and peltry, ...lbs.	817,150	566,000	557,271
Product of Wood.			
Boards and scantling, .feet.	260,335,271	299,078,633	262,279,116
Shingles, ...M,	69,822	101,527	104,270
Timber,........cubic feet,	1,798,198	1,613,943	2,098,777
Staves,...............bbls.	106,152,500	95,104,060	113,656,951
Wood, ...cords.	11,832	12,331	13,861
Ashes,...............bbls.	46,912	37,538	38,229
AGRICULTURE.			
Product of Animals			
Pork,.................bbls	80,093	76,179	87,930
Beef..... .... "	34,600	71,266	60,570
Bacon,...............lbs.	4,000,500	4,902,000	8,183,285
Cheese, ... "	35,560,118	40,844,000	43,273,526
Butter,............... "	21,477,657	22,721,000	23,729,997
Lard, ... "	6,721,000	4,348,000	9,925,666
Wool,................ "	8,966,376	12,044,000	8,529,331
Hides, ... "	310,900	172,000	174,935
Vegetable Food.			
Flour,...............bbls.	3,063,441	3,952,972	3,131,095
Wheat,............ bush.	2,950,636	4,143,930	3,116,134
Rye,.......... .... "	321,799	295,119	286,919
Corn, ... "	1,610,149	6,053,845	2,953,963
Barley, ... "	1,427,953	1,523,020	1,548,197
Other grain,......... "	1,920,800	2,040,052	2,077,724
Shiff stuffs,.......... "	1,469,232	2,091,681	1,437,487
Peas and beans,..... "	96,800	106,088	75,808
Potatoes,........... "	230,939	108,369	115,629
Dried fruits,......... bbls.	1,502,900	3,558,000	1,828,145
Other Agricultural product..			
Cotton,...............lbs.	445,100	474,000	174,700
Tobacco,.............. "	2,609,100	1,228,000	350,935
Grass seed, ... "	1,094,400	3,308,000	1,667,030
Flax seed,............ "	5,233,700	4,123,000	1,763,393
Hops. .... "	1,690,500	1,948,000	1,597,342
MANUFACTURES.			
Domestic spirits, ...gals.	1,126,549	1,693,076	1,606,131
Leather, ...lbs.	5,160,654	5,168,000	4,538,961
Furniture, ... "	2,226,114	1,972,000	1,535,365
Bar and Pig lead. ...... "	489,800	492,000	86,100
Bloom and Bar iron,.... "	10,892,243	26,348,000	29,787,506
Pig iron,............. "	10,574,740	21,608,000	11,528,683
Iron ware, ... "	1,219,091	2,014,000	2,314.064
Domestic woolens,..... "	1,425,340	1,756,000	1,103,564
Domestic cottons,...... "	2,324,774	2,396,090	2,493,561
Salt, ... bush.	692,442	382,390	343,618
OTHER ARTICLES.			
Stone, lime, &c.,...... lbs.	44,200,033	59,094,000	65,246,668
Gypsum,.............. "	12,084,100	8,518,000	3,715,980
Mineral coal, ... "	18,846,660	32,580,000	48,291,417
Sundries, ... "	90,841,614	147,988,000	97.796,439

STATEMENT showing the aggregate value of the property which came to the Hudson River on all the Canals, during the years 1846, 1847, and 1848, under the divisions as specified in the above table:—

	1846.	1847.	1848.
The Forest,...............	$8,589,291	$8,798,373	$6,994,469
Agriculture,...............	33,662,818	54,624,849	37,336,370
Manufactures,.............	4,805,799	6,024,518	3,834,360
Merchandize,.............	276,872	517,594	593,619
Other articles,...........	3,770,476	3,127,080	2,210,623
Total,...............	$51,105,256	$73,092,414	$50,969,461

The Cultivation of the Potato.

EDS. CULTIVATOR—My own experiments of eight years, with the potato, have very much encouraged me to continue the alternate culture of seed and its seedlings, with careful selections.

The process does materially improve the potatoe in *new* and *excellent varieties*—in health and productiveness. At the same time, much depends for success, upon a proper situation and preparation of soil, manner of cultivation, time of planting, lifting and good storage.

Good upland soil, deep thorough plowing, early planting—with well cultivated approved seedling varieties, in shallow drills, early weeding, light hilling, early lifting, and dry airy storage, does more for the redemption of the potato from disease, than all the nostrums the world can devise.

Potato seed, though it produces generally several different varieties in its seedlings, will not be likely to produce varieties or qualities, with which it has no connexion. If new and choice varieties be expected from sowing the seed, care should be taken to obtain seed from good varieties, or in the immediate neighborhood of the same.

Seed from the balls, will transmit from a diseased stock, in some degree, that disease to its seedlings—to some varieties more than others.

Some have gathered balls from any where, without regard to the character of the stock, planted the seed, and finding in the seedlings disease and inferior specimens, abandoned at once the experiment, and in their judgment, seedling potatoes are no better than old ones.

The same laws that govern the apple, peach and strawberry, in their culture for new and choice varieties, govern also, the potato. If a a new choice seedling apple, pear, or strawberry be desirable, why not a new and excellent potato? But neither is to be obtained without the use of their seed, and may be, not without a series of experiments, with careful selections.

Potato seed, from properly selected, well cultivated seedlings, combining through the seed the best varieties at home and from abroad, is among the most valuable seeds to be found in market.

Potato seed may be sown like the tomato, early in hot bed for an early crop; or like cabbage, in a rich bed in a warm place, and transplanted; or with a seed planter in the fields, with great profit; or broadcast, on rich fine soil, and lightly harrowed in, with no other cultivation, and the crop of young seedlings, the very best, for planting the next season.

Early sowing the seed and early lifting, gives the potato a tendency to early ripening. Lifting the potato before it has perfected its growth, it is found dryer in cooking, will keep better through the winter, vegetate earlier in the spring, and become more hardy in its constitution.

Medium sized potatoes cook better, of finer quality and flavor, will plant more ground by the bushel, and are more exempt from disease.

Nipping off the weeds, just below their roots, soon as their appearance, is a better remedy for the potato disease than *nipping the vines*.

My crop of the last season, combining all my best varieties through the seed from home and abroad, is good —Exempt from the prevalent disease, productive, and developing, from the seeds obtained not long since from different parts of the world, viz. Prussia, England, South America, Mackinaw, and other places, varieties promising a valuable acquisition to the potato market The crop of about 1400 bushels, shows distinctly in its healthy and strong foliage, loaded with balls, its strongly marked and distinct varieties, and the increase of new varieties of fine appearance, the benefits of the progressive alternate culture. N. S. SMITH. *Buffalo, Jan.* 4, 1849.

Communications from David Thomas.

I. Machine for cutting Sausage meat.—Last summer, a kind friend near Philadelphia, sent us a sausage machine, and a few days ago we tried it, highly gratified with its performance. Fourteen pounds of meat were run through it in a few minutes, cut fine enough. Knowing, however, that when chopped by hand, frozen meat always works easiest,—care had been taken to have another batch of 52 pounds reduced to that condition; but it went badly, and we had to thaw it before we could proceed with any satisfaction. It then passed through with great facility. I believe the whole sixty-six pounds might have been done in but little more than half an hour.

Every substantial farmer ought to have one of these machines; but great care will be necessary to keep the knives sharp, by excluding bones, &c., and to cleanse it, and dry it thoroughly when the work is done. For these reasons, the propriety of lending one round the neighborhood, may be very questionable.

II. Snow balls on Horses' feet.—Lately traveling in a cutter, the horse's feet collected balls of snow which annoyed and fatigued him excessively. He could not touch the ground by two or three inches; and his labor, probably increased three-fold,—was so great, that after ascending a long slope, he stopped of his own accord, nearly exhausted. On our return, I had his hoofs cleared out, and *soft soap* well rubbed in. The consequence was that no more balls collected, and he came home in fine spirits.

On a journey, to soap the hoofs *twice* a day may be best in some cases, but *once* a day in ordinary times, would be a great relief.

III. Soap-stone Griddles.—Understanding that cakes on a soap-stone griddle required no fat to keep them from sticking,—I brought home one a few days ago, and we prepared to try the experiment. The look of incredulity in the chief cook at that moment, was amusing; but it was soon turned into one of triumph, for the cakes were turned and taken off as easily as they would have been from the best greased "bake-iron;" and without any fume from burning fat, as in common cases. Besides, the cakes were all nicely browned, and not one burned in the slightest degree. It is true, soap-stone may be heated red hot, but then the plate is so thick, and heats so slowly, that all danger of burning is easily prevented. In short, we are highly pleased with the purchase, and deem it a great acquisition.

It will be important to keep these griddles very clean, and for this purpose, they may be rubbed occasionally with pumice stone. *Greatfield, Cayuga Co.*, 1 *mo.*10.

Benefits of Agricultural Societies.

We have often remarked that the great benefit of agricultural associations, is the opportunity they afford for bringing together the people, with their animals, articles and products, by which all may be compared and the particular improvements possessed by each may be seen and adopted. Mr. Fletcher, in his address before the Windsor (Vt.) Agricultural Society, in speaking of their exhibitions says:—"It is very desirable that every improvement in husbandry, and the most successful systems of agriculture, which are known to but a *few* comparatively, should be generally known and universally adopted. Here, the best agricultural products are exhibited, as an example and incitement. Here, we have an opportunity of viewing and comparing, the best of our flocks, and herds, of different breeds, to ascertain their *relative* value; and here, are exhibited, the most improved, the best specimens of agricultural implements. There, we see the rapid improvements in the mechanic arts, the handmaid of agriculture. Here, we may see the difference between the limb of a tree for a plow beam, with a knot to it for a coulter and share, and the fine plow of the present day. Here, we may learn from the modern implements how to save time and strength, and accomplish a greater amount of work. Here, the farmers of the county assemble once a year; become acquainted, promote kindly feelings; converse freely with each other, on those subjects most interesting to them. What can be better calculated to teach us to do well?"

Grazing in Michigan.

As the opinion has been prevalent among travelers at the west, that the plains and openings in Michigan, although so valuable for the production of wheat, and other grain crops, were not adapted to grazing, I have thought that it might not be uninteresting to some of your readers, to make a brief statement of facts in regard to that matter.

Shortly after I commenced improving my farm, about ten years since, being in need of meadow, I stocked down two pieces of land, one containing ten acres which had been plowed three years, and another six acres, which had been plowed two years. The ten acres yielded about two tons of hay per acre, and the six not more than one ton. The land being exactly alike, and the seed having been sown at the same time, and having appeared at the commencement equally promising, I sought to examine into the cause. When a thought suggested itself to me that it was owing to the land not having been cultivated a sufficient length of time, to have become mouldered down to that state that is necessary to the growth of grass. I therefore, deferred the business of stocking down, until I had tilled my land two or three years longer.

I then manured and fenced off one acre, and sowed with clover and herdsgrass (timothy) near my barn, for the purpose of soiling; which I used four years to a very great profit. Then, after having reduced the lot to one hundred square rods by taking off sixty rods for other purposes. I commenced pasturing in March last, and pastured the following amount of stock, viz: From the last of March to the 10th of November, 4 rams, 3 years old—1st of June to 10th Nov. 6 ram lambs, 5 months old—in May, turned on 2 cows, 10 days—in July, one yoke oxen, 10 days—from May till August, 3 calves.—The rams and lambs were kept constantly on the above named 100 square rods of land during the whole season, without having been fed any thing, except a little salt occasionally, the sheep were all fat with one or two exceptions. I have taken note of this, more particularly, because I have never heard of more than seven sheep being kept on an acre during the season.

Ours is what is denominated burr-oak and hickory soil, and is composed of a black loam and gravel, and is highly impregnated with lime. The clover, in our vicinity the past season, was equal to any that I have ever seen, without the aid of manure or plaster.

Plaster has been introduced to the lighter soils of our state, and works well. J. Gardner. *Albion, Mich.*

Orange Co. (Vt.) Ag. Society.

Our County Society held their fair at this place, (Chelsea,) on the 27th day of September last, and a splendid fair we had. We had a fine display of stock, a good number of stallion horses, very fine matched and single horses, a good number of fine sheep, a large number of cows, heifers and bulls, and then, to cap the whole, working oxen in great abundance. From Washington, there was twenty-two fine pair, in one team, and from Tunbridge, sixty-eight pair, fine red oxen, which drew a vehicle forty-five to fifty feet long, in which was a band of music. This team was led by a fine Durham bull in harness. Each pair of oxen carried a red flag, and each driver was dressed in a white frock with a belt. The whole made an imposing display. The show of manufactures and household articles was very fine. CALVIN BLODGETT. *Jan.* 1849.

Agricultural Papers.

Every farmer, however small his farm, can well afford to take a good agricultural paper, to assist him in the erection of suitable buildings and fences; the making and saving manure; the selection of proper agricultural implements; the best kinds of stock and fruit; the feeding and fattening of cattle; the management of his land and crops; thus obtaining the united wisdom and experience of science and the best practical farmers, not only of our own country, but of the civilized world. I have known farmers to lay out, through misdirected efforts, within the short period of a year or two, enough to pay for *one hundred* copies of any agricultural paper printed in the land. R. BEDFORD. *Barre, Vt.*

New-York State Agricultural Society.

Annual Meeting.

The Society met at the Assembly Chamber, in the Capitol, on the 17th ult. The President, LEWIS F. ALLEN, Esq., in the chair. After receiving the subscriptions of the members, the Secretary, B. P. JOHNSON, Esq., read his annual Report, detailing the operations of the Society for the past year, from which it appears that the operations and influence of the Society have been gradually increasing, with a most beneficial effect upon the interests of the farming community.

Mr. MCINTYRE, the Treasurer, read his annual Report, from which we learn that the receipts and disbursements, were as follows:

Receipts.—	Balance from last year,	$806 56
	From individual members,	82 00
	From State treasury,	700 00
	Interest on funds invested,	560 00
	Loan called in,	1,000 00
	Receipts at annual exhibition,	6,272 80
	Sundry other sources,	40 25
	Borrowed,	750 00
		$10,211 61
Disbursements.—	For Premiums,	$4,278 42
	For salaries,	1,015 73
	On account of Library,	316 15
	Expenses at Buffalo Show,	1,072 86
	Purchase of Tent,	250 00
	Invested,	2,000 00
	Postage,	99 28
	Printing,	260 16
	Incidental expenses,	295 42
	Sundry expenses,	225 04
	Cash on hand,	398 55
		$10,211 25

The usual nominating committee having been appointed, the Society adjourned to 4 o'clock, P. M.

Four o'clock, P. M.—The report of the nominating committee was read. They recommended that the next State Fair be held at Syracuse, and the following gentlemen for officers of the Society, who were then elected:

JOHN A. KING, of Queens, President.
VICE PRESIDENTS.
1. JAMES MONROE, of New York.
2. SAXTON SMITH, of Putnam.
3. EZRA P. PRENTICE, of Albany.
4. LEROY MOWRY, of Washington.
5. WILLIAM FULLER, of Onondaga.
6. DAVID MAINE, of Madison.
7. JOHN DELAFIELD, of Seneca.
8. HENRY W. ROGERS, of Erie.
BENJ. P. JOHNSON, of Oneida, Cor. Secretary.
JOHN McD. McINTYRE, Albany, Rec. Secretary.
LUTHER TUCKER, of Albany, Treasurer.

J. B. Burnett and P. N. Rust, of Onondaga; Henry Wager, of Oneida; J. J. Viele of Rensselaer, and Samuel Cheever, of Saratoga, additional members of the Executive Committee.

Seven o'clock, P. M.—The Society convened to hear a Lecture by Prof. EMMONS, on the connection of Science and Agriculture, after which a variety of other business was transacted.

Thursday.—The Society convened at 10 o'clock, at its rooms in the old State Hall, when the Reports of the Judges were read, and the following premiums were awarded:

On Farms.—1. H. T. E. Foster, Lakeland, Seneca Co., Silver cup, value, $50—2. E. C. Bliss, Westfield, Chautauque Co., do. $30—[Mr. P. Crispell, Jr., of Ulster Co., would have been entitled to the second premium, had not the same premium been awarded to him last year. A certificate to this effect, with a set of the Transactions, was awarded to Mr. C.]—3. To. McCulloch and Kirtland, Greenbush, Rensselaer Co., $20.—4. John Carpenter, Wales, Erie Co., set of Transactions. The committee specially commend a Farm Account Book, presented by Benj. Enos, of De Ruyter, Madison Co.

Experiments.—To W. D. Osborne, Port Byron, Cayuga, to test the value of manures, by a three years' rotation.

To Daniel S. Curtis, of Canaan, Columbia Co., $60 for the best statement in regard to the production and preparation of fine wool for market.

Winter Wheat.—1. To Amos Miller, Vernon Centre, 44 bu. per acre, $20—2. To Ira Apthorp, Riga, 43 bu. 36 lbs., $15—3. Benj. Enos, De Ruyter, 43 bu., $5.

Indian Corn.—1. Peter Crispell, Jr., Ulster Co., 90 bu. 5 lbs. per acre, $20—2. Benj. Enos, De Ruyter, 89 bu. 14 lbs., $15—3. Levi T. Marshall, Vernon Centre, 86 bu. 38 lbs., $5. Wm. Wright, Vernon, presented a statement showing a product of 116 bu. 36 lbs. for one acre; but as the rules required two acres, it was excluded from competition.

Barley.—1. Meloe Adams, Martinsburgh, 62½ bu. per acre, $15—2. E. M. Bradley, East Bloomfield, 60 bu. 9 lbs., $10—3. Benj. Enos, 54 bu. 25 lbs., $5.

Oats.—E. M. Bradley, 89½ bu. per acre, $15—2. Daniel Jemson, Galen, 87½ bu., $10—3. Benj. Enos, 86½ bu. $5.

Beans.—E. C. Bliss, Westfield, 33½ bu. per acre, $10—2. B. Enos, 28 bu. 23 lbs. per acre.

Potatoes.—For quality—1. To S. H. Church, Vernon, 269½ bu. per acre, $15—2. To Wm. Newcomb, Rensselaer Co., $10.

Mangel Wurtzel.—1. John Row, Riga, 1,489 bu. of 50 lbs. per acre, $3.

Carrots.—1. Wm. Risley, Fredonia, 1,081 bu. per acre, $8.

Ruta Baga.—Joseph Hastings, Rensselaer Co., 14,00 bu. per acre, $10.

Timothy Seed.—E. C. Bliss, 7 bu. 24 qts. on one acre and eight rods, $5.

Flax Seed.—E. C. Bliss, 18¾ bu. seed, and 431 lbs. lint on one acre and 24 rods, $5—John McNeil, Washington, good crop, but only one premium.

Butter Dairies.—1. To John Holbert, Chemung, Silver cup, value $50.

Butter.—1. To John Holbert, $15—2. To H. C. Tuthill, Kelloggsville, $10.

Seedling Apples.—To Charles Lee, Yates Co., for the Wagener apple, $5 and diploma.

An application for the prize for the best analysis of Indian corn, was referred to a committee, who asked further time to report.

Mr. Johnson reported that Dr. Fitch, who was employed to make an agricultural survey of Washington county, had completed his labors, and that the Report would be published in the Transactions.

Evening.—The Society met at the Capitol. The president L. F. ALLEN, Esq., delivered his valedictory address, which was listened to with deep attention, and was of a character deserving high commendation. He gave an interesting view of the general progress of Agriculture in this State, for the last thirty years, with judicious remarks on its present condition and future prospects. At the close of the address, the president elect, JOHN A. KING, Esq., was introduced to the meeting, who in a few appropriate words, signified his acceptance of the office, and tendered his thanks to the Society, which then adjourned.

SHOW OF FRUITS.—There was an extensive and interesting display of fruits, embracing contributions of the best kinds of apples for the season, from different parts of this State and several other states, as well as from Canada. Among the principal contributors, we noticed the names of G. Shepard, J. Frothingham, and Mrs. M'Intosh, of Montreal; A. C. Hubbard, of Troy, Mich. and Judge Barker, of Plymouth, Mich.; F. R. Elliott and J. Gallup, of Cleveland, O.; L. F. Allen and R. C. Allen, of Black Rock; B. Hodge and Wm. R. Coppock, of Buffalo; T. C. Peters, of Darien; H. Hooker, Ellwanger & Barry, J. H. Watts, and Joseph Alleyn, and J. C. Campbell, of Rochester; Thos. Rooraback, John Doulan, Robt. H. Browne, and F. W. Lay, of Greece, Monroe county; C. Paulk, of Mendon, Monroe Co.; John Delafield and John D. Coe, of Fayette, Seneca county; Peter H. Warren, of Columbia, Herkimer county; B. P. Johnson, various samples from Cayuga county; A. Marks, of Durham, Greene county; H. Snyder, of Kinderhook; Justus Harwood and Samuel Rose, of Watervliet; Wilson, Thorburn & Teller, and J. M. Ward, of Albany. Dr. H. Wendell, of Albany, sent several specimens of choice winter pears; Joseph Cary, excellent specimens of Isabella and Catawba grapes; James Wilson, a handsome collection of Camelia japonica and other flowers, among which was the spirea prunifolia; J. M. Lovett, a superb grass bouquet.

The exhibition of fruit attracted much attention, and the rooms were visited by many persons, who unanimously expressed their gratification.

EXHIBITION OF BUTTER.—The liberal premiums offered by the Society for the best butter, to be examined at the annual meeting, brought out several lots on this occasion. Much interest was evinced in relation to the competition in this article, and the premium lots sold readily at twenty-five cents per pound.

The new Executive Committee were in session on Thursday. Among its proceedings was a resolution to hold the next Annual Fair of the Society at SYRACUSE on the 11th, 12th & 13th days of Sept. next.

Notices of Publications

The Agricultural Press.

The first agricultural periodical in the United States, was the *American Farmer*, commenced at Baltimore in 1819. Two or three other publications, devoted to the same subject, were started in the course of four or five years; and the number continued to increase, gradually, till in 1840, there were, or had been in existence, upwards of 30. The number has been constantly varying owing to the commencement of new ones, and the discontinuance of others. The list of those issued at any one time has, we believe, never exceeded 28; and the number now in course of publication, we think is twenty-one—including several which have but just commenced. In noticing these, we will, for the sake of convenience, begin at *one end* of the country.

MAINE FARMER—This excellent weekly paper has entered on its eighteenth volume. It is published at Augusta, by Russel Eaton, and is edited by Dr. E. Holmes, under whose charge it has been from the beginning. We read no paper with more interest than the *Maine Farmer*. Its articles are dictated by good judgment, and are written with spirit and ability. In typographical execution, it has no superior. The people of Maine have been greatly benefitted by this publication, and we are glad to learn that their appreciation of its value is shown by a liberal patronage.

FARMERS' MONTHLY VISITOR—This is a monthly, published at Concord, N. H., and conducted by Ex-Gov. Hill. He is a gentleman of very extensive acquaintance with different sections of the country, and is in the habit of travelling, considerably, through the warm season of the year, and the particulars of his observations are given in the *Visitor*. The paper embodies many interesting incidents, and has some able correspondents.

MASSACHUSETTS PLOWMAN—A weekly paper, devoted to agriculture and news, published at Boston, by J. Buckminster & Son. The editor is an off-hand writer, and infuses much spirit into the columns of his paper.

BOSTON CULTIVATOR—This, like the *Plowman*, is designed as a general *family* paper. the leading department being devoted to agriculture. It is published weekly at Boston, by Otis Brewer. The agricultural department is now edited by James Pedder, well known as former editor of the *Farmers' Cabinet*.

NEW ENGLAND FARMER—A new, semi-monthly periodical, of which we have received the first two numbers, published at Boston. by J. Nourse, and edited by S. W. Cole, formerly editor of the *Yankee Farmer* and the *Boston Cultivator*, and author of a popular work, entitled the *American Veterinarian*. The numbers of the *Farmer* are well filled, and the work promises fair to be useful.

BERKSHIRE CULTURIST—A weekly paper devoted to agricultural and miscellaneous intelligence It is published at Pittsfield, Mass.. and is edited by Stephen Reed. It has a corps of able correspondents, and is well managed.

VERMONT AGRICULTURIST—Published monthly, at Burlington, Vt., by C. T. Hopkins, and D. W. C. Clarke, and is edited by the first named gentleman. It was commenced in July last. and the numbers thus far issued, have been of a highly creditable character.

AMERICAN AGRICULTURIST—A well known monthly, published at New York by C. M. Saxton. It has for several years been in the editorial charge of Mr. A. B. Allen, an experienced and talented writer. We are informed that his brother. Mr. R. L. Allen, is hereafter to be associated in the management of the *Agriculturist*. The latter gentleman is favorably known to the public as a writer on agricultural subjects, and as author of a valuable volume, entitled "American Agriculture," and several other works. His connexion with the paper alluded to, will be an additional recommendation to its patronage, which has always been liberal and well deserved.

FARMER & MECHANIC—A weekly paper published at New York, "devoted to agriculture, mechanics. manufactures, science and the arts." Edited and published by W. H. Starr and J. Alburtis. It is a highly useful paper, giving much valuable information, especially in reference to mechanics.

WEEKLY ARTIZAN—A weekly paper published at New York, devoted to "agriculture, commerce. manufactures, mechanics. education, science and news." Edited by S. Fleet, a gentleman of much experience as a writer, having at various times, conducted several publications. The *Artizan* is well managed. and is eminently worthy of support.

GENESEE FARMER—Published monthly at Rochester, N. Y., by D. D. T. Moore, and edited by Dr. Daniel Lee, associated with Mr. Moore and P. Barry. It is a paper which contains much interesting and valuable matter. The first number of the present volume is beautifully got up. It has a large circulation, and does good service in the cause to which it is devoted.

THE CULTIVATOR—Published monthly, at Albany, by Luther Tucker, and edited by him in connexion with Sanford Howard and John J. Thomas. To complete the list, we mention our own paper, of the merits of which our readers are the best judges.

PLOW, LOOM AND ANVIL—This is a monthly periodical, published at Philadelphia, by J. S. Skinner & Son. We have lately noticed this work, which is still continued under the same favorable auspices as heretofore. The senior editor still wields a vigorous pen, and the publication is conducted with decided ability.

PENNSYLVANIA CULTIVATOR—Pubilshed monthly, at Harrisburgh, Pa.. by Foster & Company. and edited by Dr. Thomas Foster. We have received several numbers of this work, which were filled with useful matter.

AMERICAN FARMER—A monthly, published at Baltimore, Md., by Samuel Sands. It is conducted with much ability, and has been of great service in encouraging a spirit of improvement among the farmers of Maryland, Virginia, &c.

SOUTHERN PLANTER—Published monthly at Richmond, Va. It is edited by J. M. Daniel. The paper makes a respectable appearance, and is probably supported to a considerable extent in Eastern Virginia.

SOUTHERN CULTIVATOR—A monthly, published at Athens, Ga., edited by Dr. Daniel Lee, well known at the north as a writer on agriculture. It is a very handsome and useful paper, is well filled with original matter, and appears to be well sustained.

VALLEY FARMER—A monthly, of which we have received the first number, published at St. Louis, Mo.. edited by H. Gates and E. Abbott. Mr. Gates was formerly editor of the *Iowa Farmers' Advocate*, which paper has been merged in the *Farmer*. The editors appear to possess the ability to make a good paper.

OHIO CULTIVATOR—Published semi-monthly, at Columbus, Ohio, M. B. Bateham, editor and publisher. This paper is located in the very heart of perhaps the richest agricultural state in the Union. A deep and increasing interest in rural improvement, is manifested by the people of Ohio, and under the impulse of this feeling, it is natural that a paper so well calculated to promote their interest as the *Ohio Cultivator*, should be, as it deserves, well sustained.

MICHIGAN FARMER—Published monthly, at Detroit, Mich., edited and published by the Rev. W. Isham. The editor is an able writer, and if the paper is not properly sustained, the failure is not chargeable to him.

PRAIRIE FARMER—Published monthly, at Chicago, Ill., edited by Messrs. John S. Wright and J. Ambrose Wight. Among all our exchanges, there is none, which we think better fulfils its design than the *Prairie Farmer*. Its editorials are judicious and appropriate, its correspondence is extensive, and its communications and articles generally, of a practical and useful character.

Answers to Correspondents.

Machine for Shoveling.—J. G., Mystic Bridge, Conn. We do not know of any machine of this kind, to be worked by horse-power, but we recollect seeing an account of a contrivance for excavating, which was worked by steam, and used on the Vermont Central Railroad. It could probably be adapted to horse-power. Will some of our readers, who have seen the machine. give us a description of it?

Wringing and Ironing Clothes.—B. W., Meriden, N. H. We are not acquainted with any machine for wringing clothes, and know of none for ironing, except the *mangle*, which, with various modifications, may be seen in use at many of the large city hotels, and most public institutions. If there are any special improvements in these machines, we should be glad to hear of them.

Salt for Sandy land.—T. H. C., New Albany Ind. We are not in possession of any positive knowledge in regard to the effect of salt as a manure on such a soil as you mention. Accounts respecting the effects of this article on vegetation, are very contradictory. Some former trials made by us, did not lead to a very favorable opinion of its usefulness; but we think your safest way would be to try the salt, in various quantities to the square rod. The result may form a guide for the future.

Churn.—J. B., Perrysburg, O. We are acquainted with no churn which we think would operate better than Kendall's, or Crowell's "thermometer churn." Both are for sale at the Albany Agricultural Warehouse.

J. G. P.—Mr. Downing's new work on Country Residences, is in press, and will probably be issued in the course of a couple of months.

C. B.—We have not seen a copy of the Proceedings of the Pomological Convention at New York.

S. B. H.—Millet seed is not to be had in this city.

R. P., Jr.—Nay, to your question.

Butter Worker.—D. C. M., Delhi, N. Y. We have seen several butter workers, all of which were similar to those described in vol. 3d. They work well and are thought a saving of labor. We cannot say what is the price, or where one can be had. Will Mr. B. A. Hall, of New Lebanon, tell us what his cost?

Notes for the Month.

Communications have been received, since our last, from An old Subscriber, Charles R. Smith, Farmer. Dr. G. H. Dadd, N. Longworth, G. Butler, John Johnston, S. F. C., A. S. F., F. Holbrook, J. Gardner, J. G., T. H. C., Isaac Hildreth, W. Doolittle, S. L. Wattles, Wm. N. White, D. A. Morrison, N. S. Smith, S. E. Todd, Agricola, Thos. Allen, J. O'Fallon, D. E. Gardiner, David Thomas, S. D. Martin, D. M.

Books, Pamphlets, &c., have been received, since our last, as follows:—Mr. Fletcher's Address before the Windsor (Vt.) Ag. Society, from J. A. Pratt, Esq. —Mr. Delafield's Address to the Yates Ag. Society, from the author.—Dadd's Chart of Veterinary Practice; from the Author.—Belcher's Farmer's Almanac, from C. H. Belcher, publisher, Halifax, Nova Scotia. —Prof. James Hall's Address before the Harvard Natural History Society, from the Author.—California Gold Regions, with an account of its mineral resources and sketches of the country—a 12½ cent pamphlet—from the publisher, W. H. Graham, New-York.—Rev. Dr. Bacon's Address to the New Haven Co. Hort. Society, with the Transactions of the Society for 1848.—Laws of the United States, relating to Patents and the Patent Office, with the Decisions of the U. S. and State Courts, relating to the same, to which is added an Abstract of the Patent Laws of other countries, compiled by the Commissioner of Patents, from Hon. S. Cameron, U. S. Senate.—Two packages of Brewer's Compound Marshmallow Candy, prepared by our excellent agent at Springfield, and recommended for diseases of the throat and lungs.—Report of the First Exhibition of the Worcester Co. (Mass.) Mechanic's Association, from Wm. B. Emery.

W. N. W., Athens, Ga. We shall be glad to hear from you in the way you propose.

Back Vols. and Nos. of the Cultivator.—All the engravings and plates of the vol. for 1848, having been burnt, we shall not reprint that vol.; and consequently, we cannot supply orders for that volume *singly*. We have, however, succeeded in purchasing a number of copies of it, which will enable us to supply orders for entire sets of the Cultivator, for one or both series. We can supply all the Nos. for 1848, *except the first three*—all the Nos. for 1847, and a part only of the Nos. for some of the previous years.

☞ We shall supply all orders for single back Nos. as far as we can, and those who do not receive the Nos. for which they write, will understand that it is because we do not have them to send.

Cultivator Almanac.—This Almanac was not published for 1849—consequently, we cannot comply with the numerous requests for it.

Models of Sheep.—We have received from John A. Taintor, Esq., of Hartford, Ct., a plaster model of one of his Merino Sheep. The Secretary of the New-York State Agricultural Society, has also received two similar models, representing different Merinos belonging to Mr. T. They are fine specimens of the art of modeling animals, and are very perfect representations of the animals themselves. They are the first *American* specimens we have seen of this art, and are highly creditable to the artist.

☞We have received from Mr. Daniel F. Newell, of Southbridge, Mass., samples of two kinds of apples. We do not know the name of either. They appear to arrive at maturity early in the fall, and were over ripe when brought to us. On this account it was impossible to decide fully as to their natural flavor, though they are evidently *good*.

Profitable Swarm of Bees.—Mr. W. Doolittle, of Borodino, N. Y., states that about the 20th of June last, he had two swarms of bees come out, and they went, together, into one of Weeks' patent hives. Thinking there would not be room for them to work, he added two more boxes on the outside of the hive, at the bottom. They immediately went to work, and made seventy pounds of nice honey, besides plenty left in the hive to winter the bees.

Spirea Prunifolia.—In our December number, we gave a cut and description of this beautiful shrub. We have since seen it in flower, in the green-house of Mr. James Wilson, of this city. It is certainly a beautiful plant, and Mr. W. thinks it will be sufficiently hardy for the open air. In the house, it will give a succession of flowers the whole winter. From present appearances, it will be a valuable acquisition to our list of flowering shrubs.

Weekly Agricultural Meetings.—Arrangements have been made for the usual weekly meetings in Albany, for the discussion of subjects relating to agriculture. Reports of the remarks made at the different meetings will be published in the *Albany Evening Journal*, and the substance of them will be embodied in the forthcoming volume of *Transactions* for the New York State Agricultural Society. We may also find room for publishing some portion of the discussions in the *Cultivator*.

Colts of the Morgan Stock.—Mr. S. A. Gilbert, of East Hamilton, Madison county, lately passed through this city with three fine colts and a filly, which he had purchased in New Hampshire and Vermont. Two of the colts and the filly were foaled in 1848, the other colt in 1847. They were all got by the Gifford Morgan, and, with the exception of the filly, were out of mares having more or less Morgan blood. The yearling, a very superior colt, in points and action, was by Gifford Morgan, dam by Green Mountain Morgan, grand dam "a Messenger mare." The dam of one of the other colts was a fine mare by the Sherman Morgan. We feel confident that these animals will prove of much importance to the section for which they are destined, and we would call the attention of farmers to them.

Importations of Saxon Sheep.—We are informed that John A. Taintor, Esq., of Hartford, Ct., has lately received a lot of very fine sheep, selected from the choicest flocks in Saxony. In addition to remarkable fineness of wool, they are said to possess large size and good constitutions. We are also informed that another importation of Saxon sheep, has been made by Messrs. D. W. Catlin, of New York, and Chas. B. Smith, of Wolcottville, Ct. We understand that a part of the lot is owned by T. W. Swift, of Amenia, Dutchess county, N. Y. They are said to combine great weight of fleece with fine quality, and were selected by a German of the best judgment, who owns several thousand sheep. We expect to receive, shortly, samples of the wool of these sheep.

New kind of Fence.—A subscriber at Vergennes, Vt., wishes some information in regard to a kind of fence, which is said to be made of posts, set in the ground two rods apart, with strips of sheet iron, an inch and a-half wide, fastened on—the iron prepared in oil, and painted white, to resist the action of the weather—the cost less than thirty cents per rod. We have no knowledge in regard to such a fence, and shall be obliged to any of our correspondents who will furnish any information as to its utility, cost, &c.

Exhaustion of the Soil.—The *Valley Farmer*, published at St. Louis, Mo., says, "There is no portion of the globe that is being exhausted of its fertility by injudicious cultivation, so rapidly as the Mississippi Valley, at this present time."

Dadd's Chart of Veterinary Reformed Prac-

TICE.—Being a synopsis of the diseases of horses, cattle and sheep, with their causes, symptoms and treatment." We have received a copy of the above chart, and from the attention we have given it, are inclined to think it useful to the farmer, and all others who keep animals. It is published by G. H. Dadd, M. D., Boston.

The Horticulturist.—This work, now in its third volume, is regularly issued from this office, on the first of each month, every number embellished with a frontispiece, and illustrated by numerous engravings. It is edited by A. J. Downing, Esq., the well known and popular writer on rural matters, in which department it is not deemed too much to say, that he is without any equal in this country. The number for the present month, opens with an admirable article "On the Drapery of Cottages and Gardens," showing how easily, and at what a trifling expense, the most forbidding dwelling may be converted into one of the most inviting and prepossessing appearance, simply by placing around it a bit of smooth grass and a few trees and climbing plants, which, while they cover all that before was unsightly, are in themselves highly ornamental, and impart gracefulness to what was previously destitute of every thing like attraction. Terms $3 per year—two copies for $5. Orders to be addressed to Luther Tucker, Albany.

Cotton Manual.—We perceive by a prospectus sent us, that Mr. R. Morris, of Mount Sylvan, Miss., proposes to publish by subscription, a work with the above title. It is to consist of three divisions, or volumes; the first to comprehend the experience of the best planters, as to implements, soils, manures, preparation of the ground, culture, &c.; the second is to relate to matters connected with the transportation of cotton; and the third will be devoted chiefly to manufactures, with descriptions of machinery for spinning, weaving, &c. The work is to be published in one vol. octavo, (three bound in one,) 600 pages, elegantly bound, extra gilt, to be delivered to subscribers by the close of 1849, at $5 per copy.

Imported Blood Horse.—We are informed that Mr. O. R. Lapham, of Peru, Clinton county, N. Y., has recently purchased an imported thorough bred stallion, called Leopard. He was bred in England, by the Duke of Bedford; was foaled in 1842, got by Liverpool out of Smacker, by Camel, &c. He is said to be the winner of several races in England, as the Sweepstakes at the New-Market course in 1846, and a purse at Ascot the same year. His weight is said to be over 1100 lbs. and his height 16 hands. He is represented as a well formed and vigorous horse, and we hope he will improve the stock of the country.

Fine Catte.—In our volume for 1844, we noticed a pair of yearling steers, belonging to Mr. Nathaniel Dodge, which were exhibited at the Show of the Massachusetts Society for Promoting Agriculture, at Worcester. We had, lately, the opportunity of seeing the same cattle again, at Mr. Dodge's farm, in Sutton, Mass. They are now fat, and weigh, as we were informed, 5,100 pounds. They are fine cattle—equaling in weight, in proportion to bone, any that we have seen. Their breadth and bulk of body in proportion to their height, is remarkable. We were informed that they were to be exhibited for a while in Boston.

Reclaiming Land.—Joseph Griswold, Esq., of Mystic Bridge, Ct., informs us that he has reclaimed a tract of bog land, of 55 acres at an expense of $3000, or a little over $54 per acre. We presume it is a profitable investment. We have known a larger outlay per acre in several instances, which yielded a good profit. Such reclaimed lands sometimes pay an interest of more than $200 an acre in *hay*.

Large Pigs.—Mr. Horatio Ames, of Falls Village, Ct., slaughtered two pigs on the 25th Dec. last, which were eight months and nineteen days old, of the following weights: 304 and 460 pounds. They were of different litters. Mr. A. thinks it would have been an easy matter to have brought the large one to the weight of 500 lbs. at the time he was killed. We do not know the breed of those pigs. We saw them about the first of October. They were well proportioned shoats, calculated to fat at any age.

Use of Peat.—The farm of W. O. Bartlett, Esq., near Worcester, Mass., embraces considerable tracts of peat bog. Some of these he has drained, and brought into a state suitable for the production of crops. He has dug out large quantities of peat, which has been used for fuel and for manure. For manure, it has been used in various ways; it is constantly placed in the cattle and horse stalls, where it absords the urine, the ammonia of which, being a powerful alkali, decomposes the acid of the peat, and brings its fertilizing principles into a soluble state. It has been made into compost with stable manure, and Mr. B. states that he has found a mixture of part manure and two parts peat, laid up in alternate strata, and allowed to pass through a moderate fermentation, produces as good crops of any kind, as an equal quantity of common manure. Mr. B. has also used the ashes and fine charcoal waste from locomotives. This is excellent to mix with peat—the alkali causing the peat to crumble to fine pieces, after which it produces good effects as a manure.

Hussey's Reaping Machine.—We are informed that a bill is now before Congress for renewing the patent of this machine. We are also informed that Mr. H.'s improvement in the cutting apparatus of the machine, patented in 1847, is considered indispensible in reaping and mowing machines. A communication from Mr. Hussey will be given in our next.

The Late Smithfield Cattle Show.—The late show of fat cattle, sheep and swine, held by the Smithfield Club, (London,) appears to have been one of the best which has taken place for twenty years. It will be remembered that the different breeds are here brought into competition with each other, and it will probably interest some of our readers to see how they compare, as to the prizes taken by each. Of the six classes for oxen and steers, the prizes were taken by the different breeds as follows: Class 1, four to five years old, first prize, Hereford; second and third, Short-Horns. Class II, three to four years old, first and second prizes, Herefords; third, Short-Horn. Class III, two to three years old,—three prizes, all Short-Horns. Class IV, "any breed or age above 80 stone (1120 lbs.) and under 95 stone (1330 lbs.) weight," two prizes, first, Devon, second, Hereford. Class V, "any breed or age not exceeding 80 stone (1120 lbs.) weight,"—two prizes, both to Devons. Class VI, Scotch, Welsh and Irish breeds—one prize—taken by a West Islander. In the three classes for fat cows and heifers, there were six prizes, of which the Short-Horns took four, (including all the first prizes,) and the Herefords two. In the class of "extra stock," a Short-horn ox took the prize. The first prize in the first class, (Hereford ox.) was taken by Prince Albert, who also took a £10 prize for pigs, and a "silver medal as the breeder." The gold medal for the "best ox or steer in the show yard," was awarded to a Devon, (in class V,) bred and owned by the Earl of Leicester.

Sunflower Oil.—Several inquiries having lately been made in regard to this article, we give the following from the *Morgan (O.) Chronicle*. The article is from the pen of Dr. S. A. Barker:—

"Some years since, several barrels of sunflower oil were made in this county, and those who remember it, never wish to see any more. Some of it was said to have found its way into barrels marked 'Linseed Oil,' and was used for painting. The paint would not dry, and unless some better drier than any now known can be found, it is useless for that purpose. Some was burned in lamps, in Zanesville, we know. While burning it gave ont a large quantity of gas, similar to that of charcoal, deleterious to life and health. It is totally unfit for burning, in a close apartment. Some was used for oiling machinery, but it was condemned even for that purpose, The seeds afford a large quantity of oil, but so inferior for all purposes, that its manufacture should not be encouraged."

LARGE DAIRY.—Col. **JUDAH PIERCE**, of Truxton, Cortland county, N. Y., keeps 140 cows, and made in 1848, *seventeen tons* of cheese. Who made more from the same number of cows?

PROFITS OF DAIRYING.—The *Ohio Cultivator* states that **ORRIN WILSON**, of Huntsburgh, Geanga Co., Ohio, realised from 17 cows, the past season, the sum of $606, equal to $34.64 cts. to each cow. The calves sold and the hogs fattened from the waste of the dairy, are not inclnded in the above amount. Cheese was the principal article, but the quantity made or the price obtained, are not mentioned.

Prices of Agricultural Products.

New-York, January 18, 1849.

FLOUR—Genesee, per bbl., $5.75*a*$5.87—Michigan, $5.69.
GRAIN—Wheat, per bush., $1.10*a*$1.12½—Corn, Northern, 67c Southern, 59*a*61c.—Rye, 65*a*67c.—Barley, 64*a*65c.—Oats, 42*a*44c.
BUTTER—best, per lb., 19*a*21c.—western dairy, 15*a*18c.
CHEESE—per lb., 6½*a*7c.
BEEF—Mess, per bbl., $11.50*a*12—Prime, $7.60*a*$8.25.
PORK—Mess, per bbl., new, $15.75*a*$16—Prime, $13.50*a*$14.
LARD—per lb., 7*a*8c.
HAMS—Smoked, per lb., 7*a*9c.
HEMP—American dew-rotted, per ton, $155*a*160.
TOBACCO—per lb., Kentucky, 2½*a*7.
COTTON—Upland and Florida, per lb., 6½*a*7½—New Orleans and Alabama, 6½*a*7¾c.
WOOL—(Boston prices) Prime or Saxon fleeces, per lb., 35*a*40.

American full blood Merino,..................	31*a*33c
" half blood do.,...	26*a*29c
" one-fourth blood and common,.....	24*a*26c

Agency for Patents, Washington, D. C.

ZENAS C. ROBBINS, MECHANICAL ENGINEER AND SOLICITOR FOR PATENTS, will prepare the necessary DRAWINGS and PAPERS for Applicants for Patents. and transact all other business in the line of his profession at the Patent Office. He can be consulted on all questions relating to the Patent Laws and decisions in the United States or Europe. He will procure rehearings on rejected applications for Patents, discover and point out the novel features —if there be any—prepare new papers, and obtain Patents in all cases where there is any novelty involved. Persons at a distance, desirous of having examinations made at the Patent Office, prior to making application for a Patent, may forward (post paid,) enclosing a fee of five dollars, a clear statement of their case, when immediate attention will be given to it, and all the information that could be obtained by a visit of the applicant in person, relating to the novelty of their invention. and the requisite steps to be taken to obtain a patent therefor—should it prove new—will be promptly forwarded to them by mail.

All letters on business must be post paid, and enclose a suitable fee, where a written opinion is required.

Office on F Street, opposite the Patent Office.

He has the honor of referring, by permission, to—
Hon. H. L. ELLSWORTH, late Commissioner of Patents,
" WILLIS HALL, New York,
and to the following testimonial from the Hon. Commissioner of Patents:

WASHINGTON, *November* 28, 1848.

To all whom it may concern:

During the time I have filled the office of Commissioner of Patents, and for some time previous, ZENAS C. ROBBINS, Esq., has followed the business of Patent Solicitor in this city, and has been in the daily prosecution of business in the line of his profession at the Patent Office.

I am well acquainted with Mr. ROBBINS personally, and believe him to be a man of integrity and ability, to whom persons at a distance may safely entrust their business. I am pleased to have the opportunity to say that he is faithful to the interests of his clients, and has been, thus far, very successful in the practice of his profession.

EDMUND BURKE.

Feb. 1.—1t.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

Selling Off.

LINNÆAN BOTANIC GARDEN AND NURSERY, late of WM. PRINCE, deceased. *Flushing, L. I, near New-York.* WINTER & Co., Proprietors.

In consequence of the decease of the Junior and of the advanced age of the surviving partner, the entire stock of this establishment, comprising every description, including the newest and choicest varieties, of

FRUIT AND ORNAMENTAL TREES,

Shrubs, Vines, Plants, Roses, &c., will be disposed of at *very reduced prices*, in order to close the business as speedily as possible.

Orders accompanied with the *cash*, to the amount of TEN DOLLARS, or upwards, will be supplied at a reduction of 25 *per cent* from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by *wholesale*, will be supplied at such reduced prices, according to kind and quantity, as will probably prove satisfactory to them.

DESCRIPTIVE CATALOGUES *gratis*, on application, *post* paid.

Feb. 1.—2t.

A Good Book Coming!

ALLEN'S COMPEND OF AMERICAN AGRICULTURE.

R. L. ALLEN, Esq., author of the popular work, entitled "Domestic Animals, their Diseases and Remedies," of which thirteen editions have been published in 12 months, has, after years of practical experience and close investigation, completed his GREAT WORK OF PRACTICAL AGRICULTURE, illustrated by about 100 engravings. The work will be bound handsomely and substantially in cloth, and furnished at One Dollar, single copies, and can be sent by mail to any part of the United States.

This work, we most fuily believe, is destined to have a more widely extended circulation than any work of the kind heretofore published. Mr. Allen, knowing the wants of the community, has met those wants in a plain, concise and familiar manner, and has made a work intelligible to ALL. It will be a book for

THE WHOLE PEOPLE,

and will be published about the 10th of February. Its cheapness will cause a large sale, and it will be a

BOOK FOR EVERYBODY,

As well for the man who consumes the products of the earth, as for him who raises them.

ONE HUNDRED AND FIFTY AGENTS,

Active, intelligent and honest, are wanted to sell this book, in every State in the Union. A cash capital of from $25 to $50 will be necessary. Address, (*post paid*) C. M. SAXTON

Feb. 1.—1t. 121 Fulton St., New-York.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers, Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud. and well branched, including the very best sorts. Red Antwerp, Fastolff, Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c Dahlias, including the new fancy sorts.

Descriptive priced lists sent to post paid applicants.

Feb. 1—4t. B. M. WATSON.

Poudrette.

THE LODI MANUFACTNRING CO., offer their new and improved Poudrette, for sale at their usual rates:—1 bbl. $2—3 bbls $5, and $1.50 per bbl. for any quantity over 7 bbls., delivered free of expense on board of vessel in New-York. At the Factory, where vessels drawing 8 feet water can come, it will be sold at 25 cents per bushel.

The expense per acre in manuring corn with Poudrette, will amount to about $4. calculating 25 cents per bbl. freight, and all the necessary labor included. On land previously manured, or on good sward land, one gill to the hill is sufficient—on poor ground, a good crop can be raised by one gill at planting, and one at the last hoeing. The cost of the labor alone in manuring corn in the hill with barn yard manure, will amount to more than the first cost of the Poudrette, with freight and all charges added; and the effects of Poudrette are quicker, more vigorous, and the corn reaches maturity earlier. A fair trial, *however small*, is respectfully solicited.

Apply, if by letter, post paid, to The Lodi Manufacturing Co., 51 Liberty st., New-York.

Feb. 1.—3t.

Seedling Potatoes and their Seed.

N. S. SMITH'S late improved Buffalo Seedling Potatoes, selected for planting purposes, from his late crop of 1,400 bushels, sound and healthy:—Buffalo Pinks, Russets, Reds, Whites, Orange, Purple, and Early Junes, in equal proportions, or otherwise, carefull packed in chaff, and delivered at the wharf or depot. The late increase of the stock, and a desire to make the benefits of the experiment available to all who desire such an improvement, the price is reduced to $2 per bushel, $4 per barrel.

Also seed from the balls of the late crop, combining all the approved varieties that have been collected from abroad, and also connected with the experiment for 8 years past, prepared in the best manner, and warranted to vegetate; and cannot fail producing splendid crops of many varieties of marketable size, in packets sufficient for about five bushels, and may be transmitted by mail at single postage, at twenty-five cents per packet; with directions for cultivation. To seed merchants, per lb., at a great profit. These potatoes were again awarded the first premiums at the late State Fair.

All communications, pre-paid, will receive prompt attention. Transportation of tubers safe from frost after the first of March.

Buffalo, Feb. 1—1t. N. S. SMITH.

N. B. I would say to my last year's customers, that, from the partial failure of my own potato seed, sown last spring, to vegetate, it is evident that in the process of preparation during the incessant rains of the fall of '47, some parts at least of that seed, must have been injured by lying too long separated from the balls in a wet state. If those whose seed likewise failed, will inform me, they shall be supplied from my present superior stock, without charge.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown to be of a dangerous tendency. These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural unctions, without diminishing or destroying their power, hence are safe in the hands of every one.

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle.
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines.

Feb. 1—3t.

Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample T. C. PETERS & BRO.

Buffalo, Dec 1—6t.

A Good Book Coming!

COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Vetinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK:

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

FIRST—It is a mature work and a practical one, one which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and ultra scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for THE PEOPLE.

SECONDLY—It will have an unprecedented sale on account of its cheapness. It will make a volume of 288 closely printed pages. Illustrated with over one hundred beautifully executed engravings, by Brown, and will be sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It will contain full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

BOOK FOR EVERYBODY,

As well for the man who eats Fruit as for him who raises it.

This valuable work will be published early in February.

ONE HUNDRED AGENTS,

Active, intelligent and honest, are wanted to sell this book, in every State in the Union. A cash capital of from $25 to $50 will be necessary. Address, (*post paid*) the Publishers.

JOHN P. JEWETT & CO., 23 *Cornhill, BOSTON.*

☞ A rare chance for Agents to make money. Feb. 1—2t

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion: our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

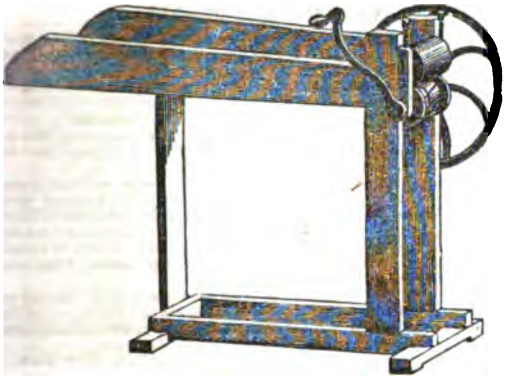
37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 73 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



Premium Hay and Straw Cutters,

BY RUGGLES, NOURSE AND MASON.

WE have recently made improvements by greatly simplifying and strengthening the construction of that kind of Hay and Straw Cutters, having *spiral* or *crooked* knives set upon the circumference of a cylinder, or arbor, and cutting against a hide roller.

The *NEW YORK STATE AGRICULTURAL SOCIETY*, at Buffalo, and the *AMERICAN INSTITUTE*, at New-York city, at their respective Fairs, held in September and October last, awarded their first premiums to these Machines, and the *Worres- ter County (Mass) Mechanic's Association*, at their Fair awarded o them its highest commendation. The Committee of the latter, n commenting favorably upon the mechanical skill, design and urrangement of the knives of " Hovey's Patent Spiral Straw Cutter," in their report, say: " Were these Cutters to be used only y mechanics whose skill might, at any time, be applied to keep hem in order, we might come to a different conclusion from that which is stated below:" and then add—" But Straw Cutters are used more generally by farmers, and are sent not only to the remotest parts of this country, but into all parts of the world, where nechanical skill may not be at command. In view of these facts, t is the opinion of your Committee, that no Cutter or other machine should be recommended to the agricultural community, or an be very useful to them, which is not simple in its construction. and this simplicity must be obtained, if need be, at some loss in ther respects.

" Straw Cutters made by Ruggles, Nourse & Mason, and entered by them, have straight knives placed diagonally upon the arbor nd fastened at the ends by caps. These Cutters are very simple n their construction, so much so, that any part, liable to get out f repair, may be repaired by any mechanic of ordinary skill. The cylinder of one of these Cutters with ten knives, consists of nly *fifteen pieces*, while that of one of Hovey's, with the same umber of knives, consists of *ninety-one*. In the same cylinder of Hovey's Cutter, there are one hundred threads cut and tapped—in hat of R., N. & Mason, *none*. These facts will show the liability f the two machines to get out of order, and the ease or difficulty ith which they may be repaired.

"After the most careful examination into the merits of these Cutters, *theoretically* and *practically*, your Committee have come to the onclusion, that the machine made by Ruggles, Nourse & Mason, the best, and they recommend it as the Cutter which will prove e more useful one to the community in general."

The improvements consist:

FIRST. The adopting straight knives, and so placing them on the arbor, (diagonally) that they work in the same manner as the spi- l knives, and being straight can be ground by the person using em, with the same facility as other farm implements.

SECONDLY. They can be replaced by the common blacksmith hen worn out, or new blades can be obtained of the makers or alers, at trifling cost.

THIRDLY. All the knives are confined to the arbor with simply o caps, and two pins, instead of eighty distinct pieces, consist- g of small and delicate screws and nuts, liable to be lost or inred, by which the great liability to get out of repair, or the ives to twist, cripple and break, is obviated.

FOURTHLY. The roller, when used with straight knives, prorly set, will endure much longer than when used with spiral ives.

FOR SALE AT

H. L. EMERY'S Albany Agricultural Warehouse, Albany. Y.
A. B. ALLEN & CO., 189 & 191 Water St., New-York.
FOSTER & CO., Utica. N. Y.
J. & E. B. ARMSTRONG, Rome, N. Y.
E. J. FOSTER, Syracuse, N. Y.
RAPALJE & BRIGGS, Rochester, N. Y.
T. C. PETERS & CO., Buffalo. N. Y. And at their

incy Hall Agricultural Warehouse and Seed Store, er the Market.) South Market Street, Boston, together with ir celebrated *Eagle Plows*, and an extensive assortment of *Ag- ultural* and *Horticultural Machines* and *Tools*, Field and Garden eds, Guano, Bone Dust, Poudrette, &c. Also, a full supply of plements made by them. for sale

AT THEIR WORKS IN WORCESTER.

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THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of " Fruits and Fruit Trees of America." " Landscape Gardening," " Cottage Residences," &c., &c.

THIS work is published by the proprietor of " The Cultivator," at his office in Albany, to whom all orders should be sent Two volumes are completed, and the third is now in course of publication. The numbers are issued promptly on the first of the month, each containing 48 pages, and embellished with an engraved frontispiece, and illustrated with numerous engravings of Rural Cottages and Villas, Farm-Houses, Gates, Lodges, Ice-Houses, Vineries, Fruits, Flowering Shrubs and Plants, &c , &c.

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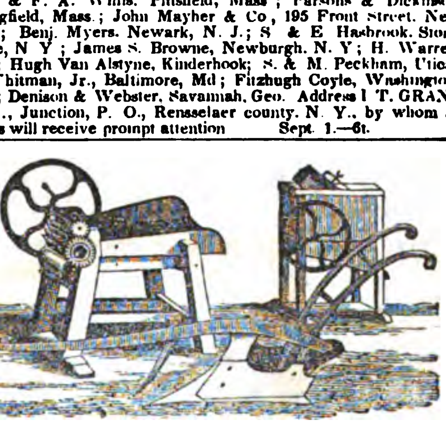

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TO AGENTS, POSTMASTERS, &C.

As an inducement to greater activity on the part of those to whom we are already under so many obligations for their annual efforts to procure subscribers to *The Cultivator*, the publisher offers the following Premiums for subscriptions to the volume for 1849:

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The subscriber having disposed of his farm, will sell at public auction at Three Hills Farm, on the Cherry Valley Road, 3½ miles west of Albany, on the 14th of March next, his choice herd of Ayrshire Cattle, consisting of the imported cow "Allice," her daughter, "Fairy," for which the first premium was awarded at the fair of the New-York State Agricultural Society, held at Saratoga Springs, in 1847. "Lassie," three years, "Moggie," two years, "Norma," one year, and "Jenny Dean," 9 months old. Two year old bull and bull calf. Also, several head of cows and heifers, a cross of Ayrshire and Durhams.

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—— Farmers' Encyclopedia, $3.
—— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, MARCH, 1849. VOL. VI.—NO. 3.

Sketches of Farms.

The Farm of W. A. Hayes, Esq.

(*Concluded from page* 82.)

EDITORS OF THE CULTIVATOR—In a former communication, I proposed to speak further of Judge HAYES' farming, under the following heads:

MANAGEMENT OF THE ARABLE LAND.—As the lands yielded nothing at the time of Judge HAYES' purchase, the first object was to place them in a state of productiveness as soon as possible. He therefore commenced by plowing up a large tract each year, putting on all the manure that could be scraped together, by a careful collection and saving of every available material. The fields were planted to hoed crops but one year, and the next spring stocked to grass with spring grain. The main idea was to enrich the lands as fast as possible; and to accomplish this, he wished to plow as often as was practicable,—thus availing himself of the great quantity of vegetable matter contained in the sod, for the improvement of the soil. The land was prepared for seeding by loosening and leveling the surface with a heavy harrow, without again bringing to day the decomposing sod. After having gone over all the arable lands once in this way, he then commenced again, by plowing up smaller fields and manuring more heavily. This he could now do, for the increasing produce and stock enabled him to enlarge the compost heaps. Since that time, not less than twenty loads of compost, of 50 bushels each, have been applied to the acre.

The sward-land is plowed in the fall—it being the most convenient time to do the work—to the depth of 6 or 8 inches, and the following spring, 20 loads or 10 cords of manure to the acre, are spread upon the surface and thoroughly harrowed in. Each load is divided into 8 heaps, a rod apart every way, which just does it. The distance at which the heaps should be placed, is regulated with sufficient accuracy, by noting the distance from the hind end of the cart to the forward feet of the cattle. The field is planted to corn, potatoes, and the various root crops one year, and the next spring a large heavy harrow, with sharp cultivator teeth, instead of the common harrow teeth, is passed several times over the land, both ways, leveling and mellowing the surface, without disturbing the sod underneath. Spring grains, with a generous supply of grass-seeds, are then sowed, and the work finished with a large roller, some four feet in diameter. In this way, the grass-seed has never failed to take well, and give a good crop, the second year, for over twenty years.

Great attention is paid to clean cultivation, it being believed to be a saving of labor, in the long run. Of course, no weeds are permitted to rob the hoed crops of nutriment, or spread their ripened seeds upon the land. The root crops, particularly the carrot, are highly esteemed as succulent food for the stock in the winter. Several hundred bushels are annually raised, the ground for them being prepared by plowing a part of the manure under the sod, and harrowing in a part upon the surface. The corn-stalks are not cut until the ear is pretty well ripened; and the butt-stalks are carefully secured under cover, with alternate layers of straw, which prevents too great degree of mouldiness, and renders the whole quite palatable to the cattle in the coldest weather of winter. The average cut of hay has been upwards of 100 tons, for several years. About half of it is consumed upon the farm, and the balance sold. This fact, in contrast with the one stated in my former communication, that "these lands originally produced only hay enough for the wintering of 6 or 8 head of cattle," would seem to render superfluous all comment upon the efficacy of Judge Hayes' mode of culture, in enriching his soil.

IMPROVEMENTS BY MIXING SOILS.—As before stated, the farm extends over a high swell, with lowlands on each side. These lands abound in clay, containing, by analysis, 5 per cent. of lime. Considerable has been done in the business of carting the clay on to the sandy soil and the sand on to the clay, and this mixture has been attended with very satisfactory results. The staple, or chemical constitution of each soil, is altered and improved by the admixture, and it is thought that another advantage, equal if not greater, arises from thus covering up the vegetable matter of the sward on the land so dressed. There are some fields on the farm which are not conveniently located to plow, plant and till, and on these it is found that by spreading a thin covering upon the surface, a good deal of the vegetable matter of the old sward is rotted, the binding out of the grasses remedied, a new and far more vigorous vegetation starts up through the covering, and the productiveness of the land is much increased. Judge Hayes would confidently recommend this practice as deserving of attention. The work is done at odd jobs, as spare time may be found; usually after haying, and until late in the fall.

To me, this is quite an interesting matter. My attention was first called to it by an operation of the kind which occurred on my land, without my instrumentality, and at the time, against my wishes. A temporary, but quite powerful stream of water was suddenly formed, and came pitching over a sand bank, bringing the sand along with it, and distributing it over an acre or more, from one to two or three inches thick. The land, a fertile brown loam, had never been plowed, and the grass had formed a very thick and tight-bound sward In so far as the covering was concerned, it was composed of a coarse sand, and I have no idea, to this day that it was possessed of fertilizing properties in itself I regarded it with much suspicion, as it lay spread over my grass-plat. It was suffered to remain through the season, however, and contrary to my expectations, a new and most vigorous vegetation started up through the covering, with which I was well pleased. There was more value in grass upon the patch, for four years following, than I had before seen upon it. A portion of the sand, where it first struck the field, was a foot thick, and remained entirely barren of herbage, and it became necessary to scrape it off. The reader may at once say that a covering thus brought on by a stream, has more or less of fertilizing properties mixed with it, and no doubt this is quite generally the case; but my observation has frequently been attracted to similar occurrences, with like results, where nothing but coarse sand or gravel could be detected. Probably, the true reason for the improved vegetation, is, that it is supplied abundantly with the elements of a new and more vigorous growth by the decaying vegetable matter of the sod thus covered, and the land is relieved for a time from its former turf-bound condition.

IMPROVEMENT OF PASTURES.—Judge Hayes' management of his pastures is most excellent, and worthy of particular consideration. A few of the pasture-fields are used occasionally for mowing and tillage, and some of the mowings as pastures; and he finds advantage in the practice. All the pastures are plowed as often as once in 6 or 7 years. As large a tract as his time allows, is turned over each year. The ground is carefully plowed at the most convenient time after haying, and the field rolled. Early in the spring—generally upon a late "sugar snow," as farmers say—a variety of grass seeds are sown, together with rye, and the field is left in common with the rest of the pasture, the rye furnishing considerable feed for the cattle while the young grass is getting root. The moss, grass, small bushes, ferns and droppings of the cattle, are thus turned under to decompose and furnish food for the new seeding. A new surface is brought to day, to be renewed by atmospheric influences; the decomposing sod underneath renders the land light and friable; thus permitting the roots of the new plants to expand and penetrate the soil in every direction. For 4 or 5 years after, a better quality of grass, flourishing in a more robust life, has possession of the soil; and the pastures steadily improve under the management. Judge Hayes would confidently recommend the practice to favorable consideration, where the pastures can be plowed and the farmer has not a surplus of manure to apply to them.

Although some of the pasture-land is somewhat uneven in surface, he has not found it to be injured by washing, from being plowed. He is always particularly careful to run the furrows across, or at right angles with the slope of the hill, which prevents injury from heavy rains.

About twenty years ago, Judge Hayes purchased a pasture of 60 or 70 acres, a mile or two back, for the sum of $500. It was not very valuable land, and was thought to be high at that price. He commenced improving it by an occasional plowing and re-seeding in the manner described, and I think he informed me that about all of it had been gone over in this way, 3 times. An opportunity occurring to purchase a pasture nearer home, induced him to sell this. He obtained $1200 for it; and thinks it was cheaper to the purchaser at that price than it was to him, at the time of his purchase; the increased productiveness mainly making the difference.

Much light is thrown upon the efficacy of Judge H.'s various methods for the improvement of grass-lands, by the remarks of Prof. Johnston, in his "Lectures on Agricultural Chemistry,"—a work which the practical farmer may read with much pleasure and profit. After speaking of enriching exhausted lands by plowing in green crops, the Professor says:—

"There is another mode in which recent vegetable matter is employed in nature for the purpose of enriching the soil. The natural grasses grow and die upon a meadow or pasture field, and though that which is above the surface may be mowed for hay, or cropped by cattle, yet the roots remain and gradually add to the quantity of vegeteble matter beneath. If the quantity of organic (vegetable) matter which these roots contain, be greater than that which the crop we carry off has derived from the soil, then instead of exhausting, the growth of this crop will actually enrich the soil in so far as the presence of organic matter is concerned. No crops, perhaps, *the whole product of which is carried off the field*, leave a sufficient mass of roots behind them to effect this end, but many plants, when in whole or in part eaten upon the field, leave enough in the soil materially to improve the condition of the land—while in all cases those are considered as the least exhausting to which are naturally attached the largest weight of roots. Hence, the main reason why poor lands are so much benefited by being laid down to grass, and why an intermediate crop of clover is often as beneficial to the after crop of grain, as if the land had lain in naked fallow."

"An interesting series of experiments on the relative weights of the roots, and of the leaves and stems of various grasses, made by Hlubek," is given. "The beds were grown in beds of equal size (180 square ft.) in the agricultural garden at Layback, and mown on the fourth year after sowing, just as they were coming into flower. The roots were then carefully taken up, *washed, and dried.*" I have not room for the details, but it appears that,—"If we take the mean of all the grasses experimented on, as an average of what we may fairly expect in a grass field—then *the amount of living roots left in the soil when a four-year-old grass field is plowed up, will be equal to one sixth more than the weight of that year's crop.*"

"A mixture of white clover, of ribwort, of hoary plaintain, and of couch-grass, in an old pasture field gave 400 lbs. of dry roots to 100 lbs. of hay—and in a clover field, at the end of the second year, there were 56 lbs. of dry roots to every 100 lbs. of clover hay which had been carried off. In an old pasture or meadow field again, when plowed up, *the living roots left are equal to four times the weight of that year's hay crop*. In the case of clover, at the end of the second year, the quantity of dry vegetable matter left [illegible] the form of roots, is equal to upwards of one-half [illegible] weight of the whole hay which the clover has yielded. Suppose there be three cuttings, (one in the first [illegible] two in the second year) yielding four tons of hay, then *two tons of dry vegetable matter are added to the soil in the form of roots, when the clover stubble is plowed up.*"

"This burying of recent vegetable matter in the soil, in the form of living and dead roots of plants, is one of those important ameliorating operations of nature, which is always to some extent going on, wherever vegetation proceeds. It is one by which the practical man is often benefited unawares, and of which—too often without understanding the source from whence the advantage comes—he systematically [illegible] himself of some of the most skilful steps he takes with a view to the improvement of his land."

IMPROVEMENT OF WET LANDS.—One of the best specimens of systematic and profitable husbandry within my knowledge, may be found upon Judge Hayes' bog-meadow. He has some 60 to 70 acres, in one body, which he has been steadily reclaiming, for about twenty years past. A portion of it had been cleared and mowed as sour meadow, for a period of nearly 200 years. It is of oblong shape, and of quite uniform width, surrounded on all sides by gradually rising uplands. It had, therefore, no natural outlet, and all the water flowing in from springs in the surrounding lands, remained in the soil, making it sour, cold and boggy, without being sufficiently abundant to form a pond upon the surface. The muck or peat, upon the

outer sides, is from two to three feet deep, gradually lessening towards the centre, where it is from six to twelve inches deep,—the whole resting upon a c[illegible]y bottom. The increased depth of the muck on the m[illegible]gins, is owing to the greater wetness of the land[illegible]sing from the in-flowing springs. This induced a g[illegible]er growth of swamp plants, as rushes, reeds, mo[illegible] ferns, &c., whose annual partial decomposition, in [illegible]cessive layers, formed an accumulation of veget[illegible] matter greater than that nearer the centre, w[illegible] moisture was less.

Allow me to introduce, in this place, a[illegible] that excellent work, "Low's Eleme[illegible] Agriculture," which gives a very conc[illegible] tory account of the formation of t[illegible]

"Peat consists of vegetable mat[illegible] gone a peculiar change. Under a de[illegible] of te[illegible] ture not sufficiently great to [illegible]compose [illegible] that have sprung up upon the surfa[illegible] plants [illegible] late; and aided by a certain degr[illegible] converted into peat, which is either foun[illegible] on the surface of plains, o[illegible] in g[illegible] on the tops and accliv[illegible] valleys, hollows and ravines. S[illegible] layers [illegible] added to the mas[illegible] it cont[illegible] cumstances favora[illegible] its pr[illegible] a necessary agent in its [illegible] and we m[illegible] a peculiar te[illegible]perature, [illegible]ly in the [illegible] temperate, an[illegible] the [illegible] that it is [illegible]ed. [illegible]ich form it have [illegible] but st[illegible] fibrous text[illegible] certain agents, have [illegible] from those which [illegible]ey we[illegible] possessed of. They [illegible] a [illegible] in[illegible]mable body, an[illegible] the [illegible] mat[illegible] vegetables as t[illegible]

"T[illegible] progres[illegible] position ha[illegible] very va[illegible] grea[illegible] primary a[illegible] tion d[illegible] formed o[illegible] other[illegible] ti[illegible] ps and [illegible] and [illegible] in [illegible] h[illegible] suffic[illegible] er[illegible] whole [illegible]

The firs[illegible] provement o[illegible] main ditch, 3 fe[illegible] cutting the springs flowin[illegible] co[illegible] into [illegible] d[illegible]ted off [illegible] cut ma[illegible] than els[illegible] d[illegible]stance [illegible] ficient nat[illegible] farther digg[illegible] g[illegible] the marginal o[illegible]s, [illegible] th[illegible] 1[illegible] to 18 inches deep, a[illegible] on top, [illegible] Th[illegible] slope to [illegible] an[illegible] up the ditche[illegible] tered over the surf[illegible] wide, each, were th[illegible]s. The hassocks and bushes were [illegible]t, and before the frost heaves the ground in the sp[illegible], the land was covered with one hundred loads per acre of a fine, yellow, micace[illegible] adjoining upl[illegible] bi[illegible] in the s[illegible] coarse herbage cover[illegible] ar[illegible] decomposed. The covering was immediately spread, a light dressing of compost—made of manure and loam, in about equal parts, with the addition of lime,—was applied, the whole thoroughly harrowed, and clover and herds-grass seeds thickly sown and bushed in.

Although, with Judge Hayes' ample means, this meadow might all have been reclaimed before this time, he has yet preferred to conduct his operations in this department, as he always has done in all his farming, by proceeding with a small piece, and a moderate and judicious expenditure annually. He has constantly [illegible]een working up towards the bushes, by taking up [illegible]ch year one land of two rods wide, from its wild and wet state, and converting it into productive mowing in [illegible] manner described. The year previous to taking up a new land, the cross ditches are cut, which renders it [illegible]r, and facilitates the operations which are to follow. All the necessary bridges for crossing these ditches [illegible]n teams are built of stone, it being deemed the cheapest mode of construction, in the long run.

[illegible] the first four or five years, these reclaimed lands invariably produce from 2 to 3 tons of good hay per [illegible] in five or six years, they need the operation of plowin[illegible] manuring and reseeding. The plowing is [illegible]one in August or September, by 'back-furrow[illegible] it is commonly called, and the ditches are then [illegible] and s[illegible]d off, scattering the mud over the surface [illegible] Late in the fall, 10 to 15 loads per acre [illegible] evenly spread over the surface, the [illegible] until it becomes perfectly fine and mellow[illegible] rolled. It is thus well prepared for [illegible]s done the following spring, up[illegible] lowlands and pastures are inva[illegible]ass seeds at this season, it being [illegible] of all ways, the surest time to se[illegible]d "ca[illegible].

[illegible] thirty [illegible] now reclaimed by this course o[illegible] Hayes doubts not but covered ston[illegible] better [illegible] open ditches, as they [illegible] underneath without [illegible] always, to some ex[illegible]tches. He has conclu[illegible] fully his part to place this [illegible]tiveness and profit in the way [illegible] leaving it to [illegible] come after [illegible]t the dr[illegible]

[illegible] stoo[illegible] meadow, viewing [illegible] which the hand of s[illegible] could not but feel [illegible]h added to the [illegible] morass, filled with [illegible] herbage, had been [illegible] meadow, covered with [illegible] valuable grasses. And what [illegible] to the pleas[illegible] of the prospect, was [illegible] investme[illegible] been so gradually and [illegible]ously mad[illegible] enterprising and sensi[illegible] farmer in the vi[illegible] might do the same.

There i[illegible] spirit of improvement in progress a[illegible] of New-England, in many branche[illegible]ss; but improvements by drain[illegible] wet lands are by no means as gene[illegible] might advantageously be. These lands, [illegible]le dry, are the most productive in grass of [illegible]; and they require much less manure to keep them so, than is necessary to bring our worn-out uplands into any thing like the same productiveness. I would, therefore, confidently urge my brother farmers to at[illegible] the redemption of their wet lands.

[illegible]clusion, I have to remark, that the great fundamental idea in Judge Hayes' farming has been to make his lands, of every description, yield good crops annually;—not to be followed by exhaustion, but by constantly increasing production. Here lies the secret of good husbandry. The eventual success of our far[illegible] must ordinarily depend upon adopting a mode of culture, which, while securing good present crops, has also in view the future condition of the soil;—a condition of gradual and steady improvement.

Brattleboro', Vt. Jan. 16, 1849. F. Holbrook.

History of Kentucky Cattle.

Letter from Lewis Sanders, Esq.

[The author of the following communication, is well known as a gentleman of much experience and extensive observation in regard to live stock. It was through his enterprise that the cattle were introduced which have been so widely celebrated as "the importation of 1817." Knowing his ability to impart valuable information relative to the success of the different breeds of cattle in Kentucky, we took the liberty of propounding to him several questions, to which he has not only very fully replied himself, but has obtained, also, answers to the same questions from another very intelligent gentleman, Dr. S. D. Martin, of Colbyville, Ky. On account of the length of the article we are under the necessity of deferring the publication of the letter of Dr. M. till next month. In the mean time we would tender our most respectful thanks to both of these gentlemen, for their interesting and valuable contributions.—Eds.]

The first emigration to Kentucky,—the "*dark and bloody ground*," the hunting grounds of the Southern and of the Northern Indians,—with the view of permanent occupancy, of holding the country at all hazards, by men determined to overcome the tomahawk and scalping knife, by the use of the rifle, took place in 1775—6. The country then belonged to Virginia; a large proportion of the first settlers were from that state; next from Pennsylvania, then N. Carolina, Maryland, New-Jersey, &c. It is presumed that the emigrants brought with them domestic animals, such as were then in common use. H. Marshall, speaking of Gen'l. Ben. Logan, in his history of Kentucky, vol. 1, says, "in the fall of the year 1775, Col. Logan removed his cattle and the remainder of his slaves to his camp," (near where Danville now stands.) Horses and cattle were subsisted in the summer, in the *range*, consisting of a great variety of nutritive native grasses, including the buffalo clover, and the wild pea vines, luxuriant beyond description; and in the winter, in the *cane brakes*.

It seems to me that the general characteristics of the cattle of the United States, at the commencement of the present century, were very similar to those of Devonshire, Dorsetshire and Somersetshire, in England, as represented in prints of cattle in those counties in the last century. I have observed the cattle of Virginia, Maryland, Pennsylvania, New Jersey, New-York, and the New England states; they seem to have had a common origin.

The first improvement in the breed of cattle in Kentucky was made by Mr. Matthew Patton and his family, to whom the country is much indebted for the introduction of several valuable animals. A historical account of them is given by Dr. S. D. Martin, a highly intelligent and sprited agriculturist of Clarke county, in this state, which is herewith forwarded as a part of this communication.

Judge Beatty, in his very valuable Essays on Practical Agriculture, (a book I recommend to all beginners to own,) treats on this subject.* These two papers, combine all the evidence it is thought that can now be obtained relative to the Patton cattle.

I have heard it estimated that the introduction of the Patton cattle increased the weight of the four year-old bullocks, twenty-five to thirty per cent, besides improving the quantity and quality of the milk. This was a great gain.

The next marked improvement in the breed of cattle, was brought about by the importation of some animals direct from England in 1817. At that period and for many years previously, I lived in Lexington. My pursuits were otherwise directed, than to agriculture; but I had early imbibed a fondness for fine stock, particularly horses and cattle. I admired good fruits, and gave some attention to their culture. For several years I was in receipt of a variety of English publications, on agricultural subjects and agricultural improvements, from which I got a glance of what was going on, in some respects, in the old country. It astonished me greatly, to see the enormous prices paid for animals of particular breeds. First, the Long-horns, brought to a high state of perfection by the justly celebrated Bakewell, Princep, Munday and Fowler. Towards the close the last century, they were at the height of their popularity. Mr. Princep refused five hundred guineas for a two year old bull of this breed. He was offered one hundred pounds each ($485) for twenty dairy cows. He refused to let his best bulls go to his neighbors' cows, for thirty guineas the cow. At this period, 1789, the circulating medium was *gold*. The bank did not suspend specie payments until 1797. Mr. Fowler refused five hundred guineas for ten bull calves of the same breed, and let his bulls out for the season (1st of April to the 1st of August,) for from £60 to £80.

Much time was required, combining capital, skill and untiring perseverance, to bring this breed to such a high state of perfection. Notwithstanding all this, it was suffered to run out, almost to disappear in the course of a few years. About the time that the Long-Horns were held in such high estimation, commenced the improvement of the Short Horns. Skillful breeders, with Charles Colling at their head, brought this breed to a very high state of perfection. Their value was at the height in 1810. In this year a public sale took place. The list of animals sold, and the very high prices paid for each, has been often published. Countess, out of Lady, four years old, brought four hundred guineas; Comet, six years old, brought one thousand guineas. He was bought by four farmers.

It seemed to me, that if four farmers were willing to pay five thousand dollars for a bull, there was a value in that breed that we were unapprised of, and that I would endeavor to procure it. I made up an order for six bulls and six cows. My views were then more inclined for a good milking than for a beef breed. The weight of authorities, given by the writers on the subject of cattle, at the close of the last, and the commencement of the present century, were in favor of the *Holderness* breed as the best for milk, and the *Teeswater and Durham* as having the handsomest and most perfect forms. I settled on these breeds. In frequent conversations with Capt. Wm. Smith, about the contemplated importation, he strongly urged me to include the *Long Horns*; he had witnessed the marked improvement made by the use of old Mr. Patton's first Long Horn bull, and he was extremely anxious to have a bull of that breed. I had great respect for him as a man, and confiding in his judgment, two pairs of the Long Horns were added to the list. The order was forwarded in the fall of the year 1816, to Buchanan. Smith & Co., Liverpool, with instructions to cause selections to be made of the best young animals for breeders, all to be two years old in the following spring.

First, a bull and heifer of the Holderness breed, to be procured from that district in Yorkshire. Next, two bulls and two heifers of the Teeswater breed, to be pro-

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The remarks referred to, though interesting, are omitted, as the principal facts are embraced in the articles of Mr. Sanders and Dr. Martin.—Eds.

cured on the River Tees, in the county of Durham. Then a bull and heifer of the Durham breed, and two bulls and two heifers of the Long-Horn breed. A minute description was given, particularising each breed, —no limit as to price. If the money sent, was not sufficient to put that number on board ship; they were to be reduced, so as to have the best animals that could be had for breeders.

Buchanan, Smith & Co., employed Mr. Etches of Liverpool, to go into the different districts to make the selections and purchases, and he seems to have executed the order with much ability. The following is the invoice:

Cattle shipped on board the Mohawk for Baltimore, consigned to Messrs. Rollins & McBlair. merchants there.

No. 1. A bull from Mr. Clement, Winston, on the river Tees, got by Mr. Constable's bull, brother to Comet.

2. A bull of the Holderness breed, of Mr. Scott, out of a cow that gave 24 quarts of milk per day—large breed.

3. A bull from Mr. Reed, Westholm, by his own old bull.

4. A bull of the Holderness breed from Mr. Humphreys, got by Mr. Wase's bull, of Ingleton.

5. A bull of the Long Horn breed, from Mr. Jackson Kendall, out of a cow that won the premium.

6. A bull of the Long Horn breed, from Mr. Ewartson, of Crosby Hall—is of a very fat breed.

7. A heifer from Mr. Wilson, Staindrop, Durham breed.

8, 9, 10. Three heifers from Mr. Shipman, on the river Tees—his own breed.

11, 12. Two heifers of the Long Horned breed, from Mr. Ewartson, Crosby Hall—of Westmoreland breed.

The Mohawk arrived in Baltimore, in May, 1817. The cattle were safely landed, in good condition. Great pains had been taken, in procuring comfortable accommodations for them in the ship, and, an experienced herdsman employed to feed and take care of them on the voyage. On arrival, they were taken in charge by my friend, Mr. John Hollins, who caused them to be put in the best pasture, and particularly cared for.

After the cattle had been shipped, and before their arrival at Baltimore, I sold to Capt. Wm. Smith, one-third of the concern, and to Dr. Wm. H. Tegarden another third; reserving to myself one-third only. A suitable agent was sent to Baltimore for them, and they were brought to Kentucky at the joint risk and expense of the three parties. On their arrival at Lexington, they were divided.

There fell to my lot, bull
No. 1. which I named Tecumseh.
No. 2. named San Martin.
No. 8. " Mrs Motte.
No. 10. " Georgiann.

Capt. Smith's lot:
Bull No. 5. which he named Bright.
7. " " the Durham cow.
9. " " Teeswater cow.

Dr. Tegarden's lot:
Bull No. 4. which he named Comet.
" 6. " " Rising Sun.
12. Long Horn Cow.

No. 10 died in Maryland, No. 3 (bull) became lame on the travel out to Kentucky, and was left on the way. He was afterwards received, and sold by the company, to Capt. Fowler, who sold him to Gen. Fletcher, of Bath county, Kentucky, where he died.

When the division took place, Capt. Smith evinced great anxiety to own the largest Long-Horn bull; Dr. Tegarden preferred No. 4, and, as neither of them were my favorites, I cheerfully yielded; and in consequence, they gave me choice of the cows. I selected one of the Teeswater Heifers and named her Mrs. Motte. It was a very pleasing occurrence to have each party highly gratified, with receiving the very animals he preferred.

The narrative of a pertinent coincident, will not, I think, be deemed ill-placed.

Mr. H. Clay, being in England in 1816, having always had fondness for fine horses and for other fine stock, concluded to send home some fine cattle. At this time, the Herefords were great favorites at Smithfield. Either from Mr. Clay's own taste, or from the recommendation of others, he selected that stock, purchased a cow, a young bull and heifer of that breed, and sent them to Liverpool, to be shipped to the United States. It so happened that they were put on board the Mohawk, the same ship with my cattle, and they arrived together at Baltimore, were there placed in the same pasture, and the agent that was sent for my cattle, brought out Mr. Clay's to Kentucky.

Although Mr. C. and myself, at that period, resided in the same city, and had always been personal and political friends, from the time of his coming to Kentucky, in 1798, till March, 1825, and our social and personal relations have been unchanged for fifty years—yet neither Mr. C. or myself had the slightest knowledge or intimation, of the intention or views of the other, in regard to *importing foreign cattle.*

Mr. Clay at one time, had a good stock of horses. He bred the dam of Woodpecker, one of our best race horses, and he proved to be a good stallion. His flock of sheep were celebrated for the fineness of their fleece.

But having introduced the Herefords, I may as well finish them.

At this time, (1817) Mr. Isaac Cunningham owned the largest and best grass-farm in Kentucky—the identical farm settled by old Mr. Matthew Patton, the father of the Patton family, who introduced the Patton cattle. Mr. C. was wealthy, had a good stock of Patton cows, and had been in the habit of selling his young ones for breeders. Mr. Clay's good judgment, led him to place his *Herefords* in the hands of Mr. Cunningham; notwithstanding all these advantages, the Herefords made no impression; in a very few years they were unknown as a breed in Kentucky, and at this day, a part blooded one is rarely to be met with.

As to the Long Horns, although there were two bulls and two cows imported, the breed has nearly run out. Capt. Smith kept them up for a while, but as he died soon after they were introduced, his stock was neglected. The Rising Sun left a good stock in Clarke and Bourbon counties, and for a while they were very popular with the feeders in those counties; but they have gradually yielded to the Short Horns. A mixture of Long-Horn blood, in a remote degree, is deemed by many feeders of great value, (and that is my opinion.) The hide is thick, the hair is long, and very closely set; they are of very hardy constitution, well adapting them to *our* mode of feeding. Cattle are not housed or sheltered, but fed out in the fields, taking the weather as it comes. The Short Horns have thin hides, fine short hair, and do not stand exposure to the weather so well.

The importation of 1817, (alluding to which it seems that the Long Horns and the Herefords, are to be omitted,) gradually gained favor with the feeders and breeders. The young ones were much sought for throughout Kentucky, and parts of Ohio, and were all sold for breeders. *Tecumseh* and *San Martin* were the principal instruments used in effecting this great improvement. Mrs. Motte, the Durham cow, and the Teeswater cow, were excellent breeders. The Durham cow was equal to the best milk cow I ever saw. Napoleon was her best bull calf. Mrs. Motte was the neatest; the finest animal of the importation.

A year or two previous to 1831, I observed that my young cattle were not up to the mark of improvement that I wished to see progressing, but were rather falling back. The only remedy that I then thought, and still believe necessary to arrest this downward tendency and to give a fair prospect of improvement, was the *introduction of remote blood.*

Col. John Hare Powell of Philadelphia, imported a number of animals of the improved Short Horn breed, several years subsequent to 1817. He ordered his selections from the best herds in England, with great particularity as to pedigree, form and milking qualities, and without stint as to price. My attention was directed to this stock, to procure a cross on the Short Horns of 1817.

In the spring of the year 1831, I procured of Mr. Barnitz, of York, Pennsylvania, a young bull and three young cows of Col. Powell's stock. In several points, their forms were better than those of 1817. The cross was very beneficial to me.

Some few years afterwards, David Sutton of Lexington, introduced several animals of Col. Powell's stock.

Then other gentlemen imported cattle from Philadelphia, and from other parts of the United States and from England; so that we had a number of bulls and cows of the best known breeds in England and in the United States. From this basis, intelligent gentlemen, with abundant capital and great skill, have continued to improve, by judicious crossing, until we have arrived at a high state of perfection, as to *form* and *early disposition* to take on *fat*, points most desired of all others by the grazier and the feeder.

Notwithstanding that Col. Powell's stock were drawn from the best milking families in England, their descendants did not prove with us to be as good milkers as the stock of 1817, nor were they so healthy.

The dairy is but a secondary consideration with a Kentucky farmer—beef is more profitable, and as the great object of all pursuits is *money*, the one putting most in the purse will be pursued. For a dairy of cows where there is a demand, selling milk is most profitable —next cheese, if the climate suits; last, making butter. A Kentucky farmer in general, has no demand for milk. Cheese can be made here as well as any where else, but it costs too much labor to save it. Some writers say that it ought not to be relied on as a business, south of 40°. Butter could be made, of the best quality, and in quantities, but it seems that the farmers prefer taking only as much milk from the cows as supplies their families with milk and butter, giving the remainder to the calves. From these considerations it would seem that the *breed* of cattle bringing most money from the butcher at two and three years old, will have the preference with the grazier and the feeder, they using nine-tenths of the cattle bred in the state.

It will be seen from what has been stated, that great attention has been given to the breeding of cattle in this state for more than fifty years, and the course pursued has been to procure the best known breeds to cross with; so that we now have an excellent breed for the grazier and for the feeder—forms approaching near and nearer to perfection, and an aptitude to take on fat at an early age. But in obtaining those grand objects, *perfect forms* and *early maturity*, so much desired by the grazier and the feeder, we have *sacrificed*, mainly, the *milking qualities*.

" Whatever be the breed, there are certain conformations which are indispensible to the thriving and valuable ox or cow. If there is one part of the frame, the form of which, more than of an other, renders the animal valuable, it is the *chest*. There must be room enough for the heart to beat, and the lungs to play, or sufficient blood for the purposes of nutriment and of strength will not be circulated—nor will it thoroughly undergo that vital change which is essential to the proper discharge of every function. Look, therefore, first of all, to the wide and deep girth about the heart and lungs; we must have both. The proportion in which the one or the other may preponderate, may depend on the service we require from the animal; we can excuse a slight degree of flatness of the sides, for he will be lighter in the fore hand, and more active; but the grazier must have *breadth* as well as *depth*. And not only about the heart and lungs, but over the whole of the ribs must we have both length and roundness—the *hooped* as well as the deep barrel is essential; there must be room for the capacious paunch, room for the materials from which the blood is to be provided. The beast should also be ribbed home; there should be little space between the ribs and the hips. This seems to be indispensible in the ox, as it regards a good healthy constitution, and a propensity to fatten; but a largeness and drooping of the belly, is excusable in a cow, or rather, notwithstanding it diminishes the beauty of the animal, it leaves room for the udder; and if it is also accompanied by swelling milk veins, it generally indicates her value in the dairy."

The introduction of the Patton stock into Kentucky, effected as much benefit to us in the improvement of our cattle, in a little more than twenty, as was effected in England in more than *sixty years*.

A printed report of a select committee of the House of Commons, in 1795, stated that cattle and sheep had increased on an average, in size and weight, about a fourth since 1732.

The average weight of cattle slaughtered for the London market in 1830, was 656 lbs. [McCullough's Dictionary of Com.]

At Liverpool, about the same period,

600 Irish beasts, averaged,	....	720 lbs.
140 English do.	....	730 "
60 Scotch do.	....	610 "

It would seem that our improved breeds exceed these weights. Twenty fat cows were sold in the early part of this month, by one drover, at Cincinnati, the average weight of which was over one thousand pounds. the four quarters. These cows were Kentucky bred. All but three had produced calves.

I expected to receive authentic data, to state the average *age* and *weight* of the *four quarters* of cattle slaughtered at Louisville, and at Cincinnati, for three periods. Though promised, the paper has not yet come to hand.

In 1833, I took to New Orleans three bullocks, produced by a cross of the cows of the Patton and Miller stock, by bulls of the importation of 1817.

No. 1. Red, 6 yrs. old, live weight, ...	3448 lbs.
2. " same age, ...	3274
3. Brindle, 4 yrs. old, ...	2868

I sold these three animals together, at auction, for the sum of nine hundred and twenty-five dollars.

I was at the New-York State Agricultural exhibition at Saratoga, in September, 1847. I very attentively examined the cattle stock there shown. The oxen were better than are generally to be met with in Kentucky; all others not so good.*

The Ayrshire cattle may be classed with our half-blooded Durhams, from common cows.

We can derive no benefit from a cross of Devon blood.

The diminutive size, and ill-forms of the Alderneys, would exclude them from our pastures.

Our climate is favorable for breeding and rearing cattle. They are free from any marked disease. I have never known an epidemic among them.

It is the custom with some farmers, as soon as the corn is in the roasting ear, to cut it up, giving stalk and all to hogs. The hogs masticate the stalk—suck and swallow all the juice, throwing out the remaining fibrous matter, which soon becomes dry. Cattle are very fond of this refuse stuff; but when taken in quantities, it causes a derangement of the maniplus, for which no remedy has as yet been discovered. At first the animal becomes restless, and is feverish. Soon after it begins to rub its head down and up a post, or any thing it can rub against—manifesting the greatest pain and misery. It continues rubbing until it dies. [We suppose this to be what is called the "mad itch."—Eds.] I have seen several so affected, and after the rubbing commenced, I never knew of one that was cured. Upon opening the animal, it is found that the maniplus is entirely deranged, dry and hard, mortification having in some instances already commenced. The only remedy, is to keep your cattle from the place where green corn stalks have been fed to hogs.

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* The show of cattle at Saratoga was inferior to any ever held by the N. Y. State Ag. Soc., and should not be taken as a fair representation of the character of the stock of the State. EDS.

Cattle of Ohio and Indiana are not so healthy as are the cattle of Kentucky. I was told by a Cincinnati butcher, who supplies with beef a portion of the Jews of that city, that he was compelled to procure his cattle for these people from Kentucky. The *Priest* sticks the animal, which is dressed in his presence by the butcher. Upon opening the animal, if any imperfection of the intestines is visible, such as blisters on the liver, &c., the Priest remarks, "this one may do for the Christians, but will not do for the Jews—you must bring up another."—The cattle of Kentucky have no blemish; the intestines are in a perfectly healthy condition; so we, only, can supply the Cincinnati Jews with beef.

I was informed by Dr. Watts of Chilicothe, a gentleman of intelligence and great enterprise, who feeds and grazes on a large scale, that he would pay five per cent. more for Kentucky raised cattle for either purpose, than he would for Ohio or Indiana cattle. He considered the risk of life that per cent. in favor of the cattle of Kentucky.

There are three epochs in the history of Kentucky cattle: First, the introduction of the Patton cattle, say in the year 1790, and some years afterwards, the Miller stock of the like blood. These were generally diffused throughout the State, improving our stock twenty-five to thirty per cent, in a period of 25 years.

Second. The importation of 1817, which gave us finer forms and an aptitude to take on fat at an earlier age, adding twenty-five to thirty per cent. upon the Patton improvement, in a period of less than 20 years.

Third. The numerous importations made into Kentucky and into Ohio, from 1831 to 1836, from which has arisen our present superior breed. To keep up this breed as it now is, requires sound judgment and unceasing vigilance, or a decline must follow.

I recommend to the breeders in Kentucky, to import at least half a dozen young bulls from the Netherlands, Holland, or Northern Germany, at once,—and renew such an importation every five or six years, for twenty years. Then to draw their young bulls from the best stocks to be found in England.

I do not think it is desirable to have a very large breed; but *form* and *early maturity*, are not for a moment to be lost sight of. A skillful breeder endeavors to shape the animal, so as to carry most flesh on the valuable points, to have the *loin and hind quarters* much the heaviest, as these parts bring to the butcher the most money.

Grass Hills, Ky., Dec. 1848. Lewis Sanders.

Prevention of smut in Wheat.—A simple and perhaps the most effectual mode of preventing smut in wheat, is to mix with the seed grain a solution of blue vitriol—sulphate of copper—an ounce of vitriol for a bushel of wheat, or in that ratio. Turn the wheat on a floor, and pour on the solution of vitriol boiling hot—using a gallon of water to a bushel of wheat. Mix it by turning with a shovel several times. Let it lie in a heap over night, and if too damp to sow readily next morning, mix in enough air-slaked lime or plaster to dry it.

Suggestions for Farmers.

System, Order, and Economy.

These may be esteemed essential virtues, and important to the welfare of mankind: they are, however, peculiarly indispensible to the agriculturist, to the farmer whether rich or poor, to secure and retain the comforts and conveniences of life. Without any endeavor to enforce this plain truth by argument, it may be useful to point out to farmers engaged like myself, in the endeavor to obtain from the soil, the *largest* product, at the least cost, some few of the methods, not yet in *general* use, though well established by the practical experience of many industrious and thrifty men.

As a working farmer, earning my bread by the cultivation of my farm, I do not pretend to claim any credit for unsupported opinions or private judgment; but desire to show and prove how much *profit* may be realised by a careful attention to system or method in farming, with order and neatness in its prosecution, thereby practicing true economy.

Preparatory, however, to the above object, it seems proper to consider some of the means by which the farmer can best arrive at system and order, and for that purpose, and to secure his full acquiescence in statements which may be set forth, certain *principles* must be admitted, or agreed on, long since well established, and we shall then arrive at conclusions with one mind —these principles are:

First—The cultivation of the earth must be accomplished, by the force of men, animals, wind, water or steam.

Second—Man can exert a force equal only to about one-sixth of the power of a horse; and can be more effective in *carrying* than in *drawing* a load; while the horse exerts more power and with greater effect in drawing, than in carrying a load or burthen.

The effective force of a horse is estimated as equal to that of six men, in labor performed from day to day.

Third—The expense of keeping a horse is about equivalent to the keep of one man per day.

Fourth—The power of man, when used without the application of his mind or intellect, degrades him in his own estimation, reducing him to a condition of servitude and dependance.

These truths being admitted, we cannot hesitate to adopt for our present purpose, a portion of the first, and say, that our farming operations in this country must be carried on by men and animals. But, as the force of one horse is equal to the force of six men, we *must* in preference use the power of the horse as most economical. Man, however, having intelligence, possesses in that faculty, a power of infinitely greater value than his physical force; he soon learns that his hand is a tool of wonderful contrivance, surpassing all others in utility, and the same intelligence quickly points out to him the existence of certain fixed powers or mechanical forces, which his hand may readily combine; and thus form for himself tools and machinery to effect any desired object, far exceeding in force or power, any effort of men or horses. It is by this increasing intelligence of the farmer, his seeking after knowledge, and by its application, that, within a comparatively short period, he has ascertained the most perfect means (by aid of machinery) to divide and break up his soil, no matter how tenacious or resisting; to reap his grain and grasses—to rake and collect them on the field, to house them in his capacious barns; to thresh and clean them for a ready and never failing market.

From this source he is now enabled to perform his work with greater truth and accuracy; he economizes time, he saves labor, and thereby enriches himself and his family.

These results of the farmer's intelligence, are made manifest by the several agricultural reports sent forth from the Patent office, as well as by the pages of *The Cultivator* and other valuable agricultural periodicals. As, however, the use of machinery in farming has not yet been sufficiently extended to make its benefits known to our farming interest—it is proposed, as opportunity offers, to bring these objects more minutely to their notice, and endeavor clearly to prove their profits and advantages, as closely connected with System, Order and Economy.

I have proposed above, to consider some of the means or machinery, by which the farmer can best arrive at system and order, with economy. Certain principles have been laid down, which it is believed are too well established to admit of doubt.

In this country, where agriculture takes the lead in importance, of all other professions, and where the government is more dependant on her farmers for its welfare, than on any other class of men; and where the immense tracts of public land are proffered to the industrious at a nominal value; manual agricultural labor must and will for years to come, be expensive. In this fact, we find a prominent exciting cause for the introduction of machinery, whereby one animal may be made to accomplish far more than the power of six men. And happy is it for us, that our native genius nearly keeps pace with the urgent demands for mechanical combinations.

We now have the Plow, Harrow, Cultivator, Seed-sower, Horse-rake, Reaper, Cart and Wagon—the Threshing machine, Clover mill, Fanning mill, and portable Grist mill, so constructed, as to be applicable to any and every farm, and to render the farmer independent of a large portion of the labor, which hitherto has been a grievous tax upon his products, and consumption of his time. To the foregoing, may advantageously be added in many places, the Hay, Straw and Stalk Cutter,—Corn and Cob Crusher, and the Circular saw, all of them used by the power of the horse.

The larger portion of these implements are *necessary* to the economic farmer, in greater or lesser quantity, according to the size of his farm.

It would be bold indeed to claim perfection for any of these farming machines, but the endeavor will be to test their economy, to show how they enable us to improve System, which will naturally lead us to do all things neatly and in Order.

The *Plow* is the first machine named, and has been so long in use, and undergone so many changes for the better, and prejudice does *yet* hold so fast of the minds of many in regard to some one favorite pattern, and as construction does not interfere with the object in view, no allusion is necessary to the several admirable forms of plow we have in use; nevertheless, I have so often witnessed the loss of time, imperfect work, and a consequent loss of crop to the farmer, by careless practices with this machine, that a few remarks will be applicable. Many farmers seem to view the plow as a common, unimportant implement, not requiring their special care and attention,—not knowing the amount of science that has from time to time been applied to its construction, in order to present the least resistance to their teams, and divide their soils in the most perfect manner.

That this is true, appears by the condition in which the plow is too often found after use—often left in the field, or on the road, exposed to the burning heats of summer, and to the frost, ice and snow of winter. How long will a good plow last, thus exposed? Not over two or three seasons, if so long; on the other hand, if the farmer had done his duty, and housed his plow *in clean* condition, and afforded to it one coat of paint during a leisure hour in the winter, his plow would last not less than six, eight or ten years, performing well its annual duty. There is no one implement on the farm more important than the plow, and none needs more skill in its proper adjustment and use; yet the absence of system, of order and economy, causes an expenditure for plows every two or three years, which might be prevented by attention to order, for three times that period. But this is not the only source of waste arising from this vicious carelessness. I have seen plows used, where the coulters were one-quarter of an inch broad, where the cutting edge should have been; preventing a clean cut, and increasing the labor of the horses—and the same difficulty is often experienced by the rusting of the mould board, which, by its roughness, holds the soil and impedes the plow, thus wasting time, and not unfrequently turning the plow from its course.

So also, as regards the harrow, much time is lost in bringing a field to proper tilth, by the exposure of this implement to the weather, instead of carefully preserving it, by cleaning, painting, and keeping the teeth sharp. It may not be easy to estimate with precision, in dollars and cents, the loss sustained from the foregoing causes, but from experience and observation, I think the difference *in results*, from work done with perfect and imperfect implements, may safely be estimated at one third. Now the cultivation of an acre of wheat costs about and not less than ten dollars, so that the careless farmer loses from this cause alone, $3.33 *per acre* on his wheat, a loss somewhat alarming, and sufficient, if saved, in one season, to afford a tool-room, and paint for years to come.

If we compare the loss of the incautious man, with the sound economy of the prudent farmer, upon a field of wheat of twenty acres, we find the latter has the advantage by $66.66 on the crop, besides other benefits which every thinking farmer can anticipate.

Here is a positive loss, encountered by too many farmers, by reason of want of system and order, which it is hoped will be avoided by all who may read these remarks, and find any applicability to themselves.

Before we consider the economy of the next implement on the list named by me, it may be well to say, that judgement in the *selection* of our proper tools and machinery is essential to economy, and to the due preparation of the soil for our seeds and plants; and it is here noticed, because we are frequently mortified and disappointed by the pertinacity and cupidity of men who peddle *imperfect* farming machines, tempting the unwary by presenting them at their very barn doors, pressing their use with importunate zeal. Oft times, when too late, the implement is found devoid of merit, or made of materials too imperfect to endure the severe service of the farm.

The plow is so important to us, that I must allude to it again in my next, in connexion with the harrow and cultivator. AGRICOLA. *Seneca Co., Feb.* 1849.

Farmers' Clubs.

EDS. CULTIVATOR—We are by nature calculated for sociability and society; hence the many associations which are formed. In an agricultural community, Farmers' Clubs are believed to be the most useful and appropriate associations that can be formed. The occupation of the farmer has too long been considered by many, as a dull stupid business, requiring but little learning or mental exertion; but the facts are entirely the reverse. His success depends upon the subtle and refined agencies of nature. To understand the principles which lie at the foundation, so that he can rely upon them, aided by their own exertion, to produce their natural effect, is a matter requiring great mental search and practical experience. Farmers have, by observa tion and practice, acquired more of this knowledge, and have done more to bring about the high state of civilization which we now enjoy, than they have credit for. Farming commenced at an early age. Those who first abandoned the shepherd state, cleared, fenced and cultivated their fields; built houses, established permanent residences, and owned and possessed their property individually, were the first who were fully entitled to the name of farmers. And as civilization cannot exist in a wilderness country, this may justly be considered, the first step towards civilization, with all its attendant benefits. And just so fast as agriculture has progressed; just so fast have arts, sciences and refinement progressed, and no faster. All have been dependent on the farmer for their food, and most of the raw materials with which they are clothed.

During this long process, the farmer must have acquired a great amount of information, founded on natural principles as well as practical experience. Still they have been contented with less scholastic education than those engaged in most other pursuits; and have not, like them, profited by keeping a journal or record of their operations. The merchant and manufacturer know from their books, the exact profits or loss, of all their operations; they know exactly, the advantage of every improvement, over the former practice; while the farmer, for the want of proper records, has to guess at all this. While one thinks he has made an improvement, another doubts it, and no one can determine with certainty. Important facts, it is true, have been obtained by scientific men; individuals too, have determined important facts by actual experiment; all which have been, and are continually published, and are doing much good. But from some cause, the great mass of common farmers are not profiting by these publications, as we could wish. It is believed, if they would form societies, keep a journal, and try the experiments for themselves, noting profit and loss, they would readily adopt the most useful improvements.

The formation of Farmers' Clubs, seems to be the most natural way, to cause the improvement made and published to be generally adopted; and to make improvements themselves. They could, by a small contribution from each member, purchase the latest works; also the journals as they are published, the reading of which would naturally beget a spirit of inquiry. Each would be anxious to possess as much information as his fellow. Thus a degree of useful competition would spring up, both as to the acquisition of knowledge and its practical application.

It is well known that farmers generally, are unwilling to put their ideas on paper. Many of us who learned to write a tolerable hand while at school, have paid so little attention to it since, as not to have acquired an easy business hand; or the ability to put our thoughts on paper intelligibly. This cannot be well done without some experience and practice. They should at least, be able to write intelligibly on matters relating to their occupation. To do this, the mind, as well as the hand, needs some training and practice. Whenever we make a tool or implement with our hand, we have the thing as it is, to look at; if it does not suit, we can try a second or third time, until we get it to answer the purpose. The same rule will apply to the putting our thoughts on paper; we cannot tell how they will read until we make the trial; and we should keep trying until we succeed tolerably well. This will do much towards training the mind to correct and systematic habits of thinking.

Let each member of the club, procure a good sized blank book; commence, say in the spring; write down all matters which relate to the operations of the farm, viz: Number of acres, the soil, manner of tillage, quantity and kind of manure; the time of seeding of all kinds of grain and vegetables, quantity of seed per acre; the situation of the land, as to wet or dry; making suitable entries during the season, as to the weather, the growth of crops, whether doing well or not, and the probable cause; the time of harvesting, yield per acre; if good or poor, the probable cause; the time of selling, the price, if high or low. A memorandum somewhat similar, as to the stock; the diseases with which they are attacked, if any, the remedy used; and the effect. Let an exact account be kept of the outgoes and incomes, and a balance be struck at the end of each year; taking special pains through the year to ascertain causes and their effects; and be not afraid of writing too much. By this course they would soon acquire the habit of putting their thoughts on paper in a systematic way. At the end of each year, these papers could be presented to the club, and examined by a committee; and all matters worth remembering, put into a condensed report, and recorded. By this course, a comparison could be made between the different systems practiced, and the best could be adopted. By this it is believed every important improvement would soon become general; errors would be detected and abandoned. Committees could be appointed to make tests and examinations on all important matters, and report. The presiding officer should make an annual address; the secretary could correspond with other societies; reports could be made to the county agricultural societies, and all matters of sufficient importance, published. All this being done by the farmers in their own way, would create a spirit of inquiry, and give them confidence in themselves, and tend much to the improvement of their mind as well as their farms.

Wherever such a society is formed and well sustained, we may expect to see in a very few years visible signs of improvement, in the cultivation of fields and gardens, the improvement of stock, in the planting and cultivating fruit and shade trees; in buildings, and in the general taste and neatness in all farming operations as well as an increase of profits. These may be looked upon as the natural consequence. The members would stimulate each other, an honorable and profitable competition would spring up; natural causes would be looked into, and their effects ascertained. Thus the farmer and the farm would go on improving together. FARMER. *Columbia, N. Y., Jan.*, 1849.

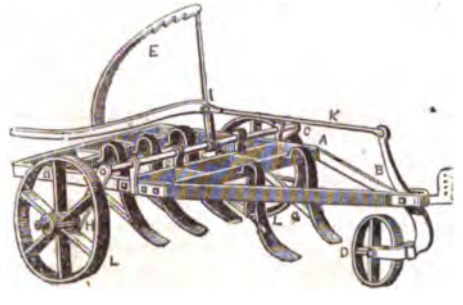
Agricultural Implements.

Extirpators or Scarifiers.

PERHAPS there is not a more serious defect in our husbandry, generally, than that which permits the growth and increase of noxious plants. In many instances a singular negligence is manifested in this respect; the soil becoming filled with weeds, thistles, and grasses, which greatly detract from the yield of cultivated crops.

On common arable lands, the most injurious of these foul plants, is couch grass—*Triticum repens*. From its innumerable lateral roots, which extend in every direction, it completely overruns the soil, matting itself so firmly over the surface, that little chance is left for the growth of anything else. The implements commonly used, effect but little towards the eradication of this pernicious grass. If the ground is plowed, the sward is merely reversed; the roots, sprouting at every point, instantly send up new blades, and in a short time, the surface is as green as ever. The common harrow takes but little hold of it, and unless used in dry weather and in connexion with frequent plowings, only makes it grow faster. Such, also, is the effect of chopping it with the hoe, unless the operation is repeated so often as to prevent the top from acquiring any growth. An implement is wanted that will penetrate the ground to as great a depth at least, as it is moved by the plow, and which is at the same time calculated to thoroughly stir the soil and bring the fibrous roots to the surface.

Various kinds of extirpators or scarifiers are used by the English and Scotch farmers for cleaning the soil. Of this class of instruments, one called, from the name of the inventor, Finlayson's Scarifier or grubber, (fig. 30) has been extensively employed, and is, probably, as efficient as any in use. It is described by Prof. Low, in his *Practical Agriculture,* as follows:



30—SCARIFIER OR GRUBBER

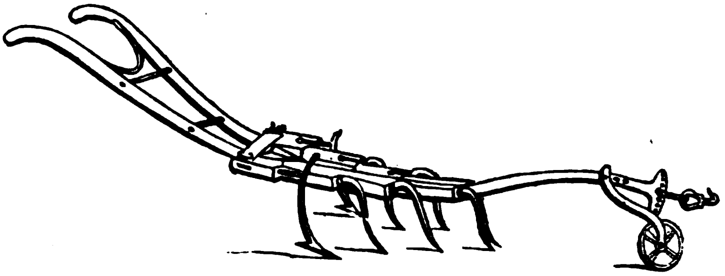
' It is made wholly of malleable iron, and consists of a frame supported by wheels, and having inserted into it a certain number of curved teeth or prongs. It is so formed that the wheels can be raised or depressed, so that the frame can be brought nearer to the surface of the ground, or raised more above it, by which means, the prongs penetrate the soil to a greater or less depth. This instrument was originally formed with nine prongs in two rows, and required a power of four horses to work it. It has now been lessened in weight, and the number of prongs reduced to five, so that it can be readily worked by a pair of horses. It has further undergone certain modifications, so that its frame with its prongs can be more readily raised or depressed, and the prongs more easily set at a greater or less depth, or raised wholly out of the ground, by the workmen. The figure shows the form of the machine, as it is now constructed.

" It consists of two parallel sides A. A., with two sets or pairs of cross-bars, as shown in the figure. Into the hindmost of these sets are inserted three curved teeth or prongs, and into the foremost set two prongs. From the foremost set of bars, the sides begin to converge, so as to meet at B., where there is a bent lever moveable on a bolt, and connected with the wheel D., which runs upon the surface. This lever is attached by a bolt to the rod K., and this rod again by a bolt at I. with the handle C. The handle is bent at the same bolt I., and connected at O. with the horizontal rod *c. c.*, by which means, when the handle is elevated or depressed, the rod *c. c.* is turned. This rod has an arm at each extremity, H., at right angles to it, which carry at their ends the hind-wheels L. L. Standing upon the frame, in the manner shown in the figure, is a curved bar, E., with a set of notches on one side, so that the handle, being raised or depressed, can be fixed at any given position. When the handle is depressed, the radial part O. is drawn back, and consequently the rod K.; and thus the wheel D. is pressed downward—the point of the frame B. rising in the same degree. Again, by the same depression of the handle, the rod *c.* is turned, and the arms H. P. are placed more vertical, and the wheels L. L. are lowered; or, in other words, the frame is raised. Thus the depression of the handle raises the whole frame with its prongs. Again, when the handle is elevated, the operation is reversed; the wheels are raised, and consequently the frame approaches nearer to the ground, and the prongs penetrate deeper. Thus, the prongs can be elevated or depressed at pleasure; and thus by fixing the handle in the notches at a greater or less height, the prongs work at a greater or less depth in the soil. By pressing the handle sufficiently down, the prongs can be raised entirely out of the ground, which is required when turning at the end of the ridges, or taking the machine from one place to another.

"The curvature given to the prongs is for the purpose of preventing any roots or other substances raised from the soil, from collecting and impeding the machine. They are supported by stays *a. a.*, and they cover a space of about 4 feet 4 inches.

" The introduction of this class of instruments into tillage, must be regarded as beneficial and important. When land is full of root-weeds, the repeated operation of the plow, the harrow and the roller, is resorted to for tilling and cleaning it. In these cases the grubber is a useful assistant, and may frequently supercede the necessity of one or more plowings.

" The grubber can be made to go to any depth which may be required, and thus the soil can either be stirred to the depth at which it had been originally plowed, or to such lesser depth as may be deemed expedient. It is, in this respect, greatly superior to the harrow, which we cannot regulate in this manner. The employment of the grubber, however, does not supersede that of the harrow in the pulverization of the ground and disengaging of the roots and weeds. The harrow is still to be used in conjunction with the grubber, and especially for collecting into heaps the roots of the plants brought to the surface."

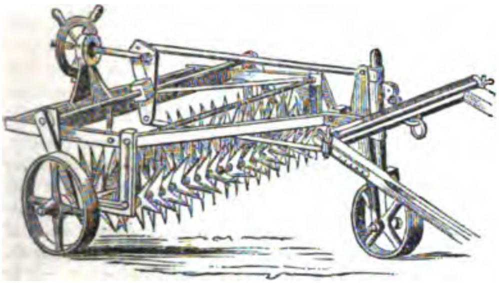


31—SCARIFIER OR CULTIVATOR FOR HOED CROPS.

We will remark that a better implement than the harrow for collecting the roots and weeds, is the spring tooth horse-rake. It should be made of wire a size larger than is commonly used, and will answer admirably for the purpose mentioned.

SCARIFIER OR CULTIVATOR FOR HOED CROPS.—The implement above described, it will be seen, is intended for open fallows. One, similar in principle, but on a smaller scale, is wanted for hoed crops. The common cultivator, especially when made of cast iron, frequently fails to perform the work required, in a proper manner. Clayey soils sometimes run together and become so close and hard as to be almost impenetrable to the roots of plants. This hard crust also prevents the absorption of moisture from the atmosphere, as well as its exhalation from the subsoil, and renders the crop liable to injury from drouth. The cultivator and harrow, as usually made, are only superficial in their action; and the common plow throws the ground too much into ridges and hollows, and by its pressure or the subsoil, rather increases its compactness. An implement is wanted that will loosen the soil to such a depth as to keep it free and open, and at the same time effectually clean it from weeds and grass. Fig. 31 represents Finlayson's "Drill harrow, or horse-hoe," for working between the rows of crops. It can be regulated to any width or depth required, so as to suit the breadth of the rows. It is made of wrought or malleable iron, and the teeth should be laid with steel at the lower end.

We are not aware that such an implement as is here described is made in this country; but we hope some of our mechanics may be induced to commence the manufacture of this or a similar kind.



32—NORWEGIAN HARROW AND CLOD CRUSHER.

Norwegian Harrow and Clod Crusher.—Another implement, calculated for cleaning the land, has lately been brought into use in England, called the Norwegian Harrow. Since it was first introduced, its construction has been somewhat modified and improved, and it is thought it will prove of great utility. It is thus described:

"The acting part of this implement consists of a frame containing four horizontal spindles, on each of which is fixed a set of cast-iron bosses, with teeth projecting from them like the rowels of a spur. These teeth revolve with the spindles, those on one spindle interworking with the others, so that they severally clear and clean each other. The effect produced is a remarkable bruising, crumbling or disintegration of the soil, without any clogging of the spikes, or possible derangement of the working parts. The weight suffices to cause the spikes to penetrate to the required depth, which is also governed by an adjustment of the wheels applied for travelling the implement, and for taking it out of work when turning; but it acted quite as well when divested of the wheels and of other paraphernalia, which tended rather to embarrass than to assist its good action. Neither stones nor sods appear in any way to obstruct the way of this eminently simple machine, the stones being pushed aside and the sods torn to pieces. The force was thought to be less than that required to work a common set of harrows going equal depth, and the effect in pulverization much greater. It was tried on two different kinds of soil immediately after plowing, with similarly good results."

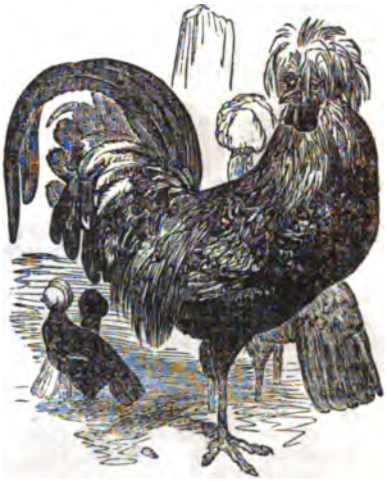
At the meeting of the Royal Agricultural Society in 1847, this implement was subjected to the examination of a committee, who spoke favorably of its operation. They observe that "it is capable of thoroughly breaking up the furrow slices from three to six inches deep, as the farmer may require, leaving the soil in a beautifully pulverized condition." It worked the breadth of five feet at a time. Its effect on the soil is different from that of the clod-crushing roller, as the latter leaves it firm and comparatively compact, while the Norwegian harrow leaves it perfectly light and loose.

Look well to cows and ewes which are about to bring forth young. It will be proper to give them a little meal, and oil-cake, for 2 or 3 weeks before parturition.

The Poultry Yard.

Varieties of the Domestic Fowl.

Crested Fowls.—Of the different kinds of domestic fowl, those having a crown of feathers, proceeding from a fleshy protuberance on the back of the head, may be regarded as among the most ornamental, and cannot fail to attract the attention of the *fancier*. Their origin is unknown, but they have existed a great length of time, and were described by Aldrovandus, several hundred years ago. This tribe embraces several varieties, which are found in various countries of Europe, and have been brought to America. Several of these varieties are held in great esteem by poultry fanciers, and are cultivated with great care on account of the peculiarities possessed by each. In size, the tribe generally, is about a medium. They are good layers, seldom wanting to sit, on which account it is best to have their eggs hatched by some other breed, whose natural constitution better adapts them to raising chickens. They are occasionally met with, having five toes to each foot, like the Dorkings, and as is sometimes the case with the Bantams. The principal varieties of crested fowls are the following:



33—SPANGLED POLAND FOWL.

1. *The Black Poland.*—The cock and hen are both of a glossy black, the head ornamented with a crest or top-knot of white feathers. This variety has been considerably disseminated in this country.

2. *The White Poland.*—A beautiful fowl, when well bred, entirely white, with a large top-knot of the same color as the body. A sub-variety of this stock was formerly in existence, which were pure white on the body, with *black* top-knots. It was described by Aldrovandus, but is supposed to be now extinct.

3. *The Spangled Poland.*—This breed, (fig. 33) is described by Martin as follows:—"The spangled Polish is a very beautiful and valuable bird, and by no means of every day occurrence. The plumage generally is of a clear orange, with shades of brown and green, every feather being tipped with *white*, so as to produce a spangled appearance. The hackles are green and orange-brown; the thighs black, more or less spangled with golden yellow. The hen is of a golden yellow, shaded with brown, and spangled with *white*. This breed is valuable, not only for its beauty, but for the excellence of its flesh. The hens are good layers, and make attentive nurses."

4. *The Spangled Hamburgh.*—This is the name given by Martin to a variety which has been known in this

country, as the "Golden Top-knot," and "Pheasant Top-knot." Some accounts represent it to have been produced by a cross of the English pheasant with the Black Poland fowl. "The general color is golden or orange-yellow, each feather having a glossy dark brown or black tip (not white,) particularly remarkable on the hackles of the cock, and the wing coverts, and also on the darker feathers of the breast. The female is yellow or orange-brown, the feathers in like manner being margined with black. Birds thus colored are called *golden spangled*, but there is also a *silver spangled* variety, differing in the ground color of the plumage, being of a silvery white, with perhaps a tinge of straw-yellow, every feather being margined with a semi-lunar mark of glossy black. Both varieties are extremely beautiful, and the hens lay freely. First-rate birds command a high price, and the same observation applies to the spangled Poland."

34—THE SPANISH FOWL.

THE SPANISH FOWL.—Of this excellent and beautiful variety, (fig. 34,) there have been but few specimens introduced to this country; and as we have not sufficient acquaintance with it to justify us in giving a particular description, we copy, entire, that of Mr. Martin, who appears to hold the breed in high estimation.

"Like the Black Poland, this breed is clad in glossy sable plumage, but is not crested with a top-knot; on the contrary, the comb is remarkably large, single, and often pendant on one side; the wattles are extremely developed, and the skin below the ear on each cheek is *white*, contrasting strongly with the scarlet of the comb and wattles, and the glossy black of the plumage. The cock is a noble and stately bird, remarkable for size and height; it is in fact, superior in stature to all our domestic races, if we except the Kulm, or Malay fowl, and at the same time it possesses excellent symmetry. The hen is also of large size and good figure. Brought originally, as it is believed, from Spain, this breed is nevertheless very hardy, and is reared as easily as any of inferior importance. To those who breed fowls for the sake of the flesh and eggs, this fine variety cannot be too strongly recommended. The flesh is delicately white, tender, and juicy, and the hens are free layers. Some persons complain that the hens are far better layers than sitters. Better layers are none, but we cannot say that we subscribe to this complaint; indeed, a breeder of these fowls, for his own use, in the neighborhood of the writer, affirms that the hens made excellent sitters and nurses, and he has had many years' experience respecting them. The eggs are of very large size, and of first-rate flavor.

"Inferior cross-breeds of this Spanish variety are very often to be seen; but such are not worth keeping. Let the pure strain only be adopted; it may be preserved from degenerating by the occasional introduction of males of the same race, and up to the mark in every point, which have descended by a collateral branch from the same root, and which have therefore, only a remote connexion with the stock to which they are admitted. It is thus that breeders may often benefit each other by mutual exchanges."

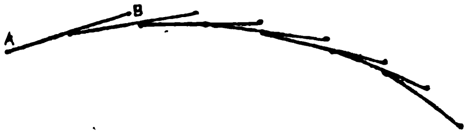
The Horticultural Department

CONDUCTED BY J. J. THOMAS.

Laying out Curved Walks.

SINCE the attention of men of taste in our country, has been more directed to an improved style of laying out grounds,—and particularly in the rejection of stiff lines and straight walks, and in the adoption of pleasing curves,—the want of an easy and certain mode of reducing plants to practice, and of staking out any desired curves upon the ground, has been much felt by the inexperienced. We therefore lay a very simple mode for this purpose before our readers.

Take a ten-foot pole (or of any other convenient length) and place it upon the ground in the direction of the commencement of the intended walk, shown in the annexed figure by the line A. B. Then measuring on one side of its forward end, one, two, three, or more inches, according to the length or shortness of the curve, stick in a small peg at this measured point, and another close to the middle of the pole. Then slide the pole forward half its length, bringing it close to the two pegs, and then measure off the same distance again from the forward end, and continue to repeat the operation till the desired curve is formed. An inspection of the figure will nearly of itself explain the mode. A long curve may be made to pass gradually into a shorter one, and vice versa, by gradually increasing or diminishing the distance measured from the forward end of the pole.



If one inch is the side distance at each successive measurement, the radius of the curve thus formed will be about 330 feet—from which an increase or diminution in size, may be easily reckoned, and applied in practice.

Dwarf Pear Trees.

F. R. ELLIOTT, in his report on fruits to the Ohio Convention, says that without resorting to the early fruitfulness produced by quince stocks, but from standard trees on pear stocks, he has obtained fruit in the following periods:—Bartlett and Wurtemberg in two years *from the bud;* Lewis and Foster's St. Michael, in three years from the bud; Amire Joannet, Muscat Robert, Duchesse d'Angouleme, Dearborn's Seedling, Fine Gold of Summer, Ne plus Meuris, Passe Colmar, White Doyenne, and Columbia, in four years from the bud. He is of opinion that in ten years, pear trees upon pear roots only, will be sought by the planter, except in small town gardens.

Ohio Fruit Convention.

The unparalelled increase in the dissemination of fruits through all parts of our widely expanded country, is giving a new feature to pomological investigation. Where formerly half a dozen neighbors could hardly be brought together, for the sole purpose of discussing fruits, we now have large organized conventions, not only from all parts of a large state, but from half the states themselves in the Union.

The fruit growers of Ohio, held in 1847, the first convention of the kind in the country, the proceedings of which were published at length in pamphlet form. With untiring enterprise, they have now given to the public, in a closely printed pamphlet of 64 pages, a full account of the second convention, held last autumn at Columbus.

The convention consisted of 25 delegates—a more convenient number for comparing fruits by cutting up and eating, than the 70 at Buffalo, or the 250 at New-York. A. H. Ernst, of Cincinnati, presided, and M. B. Bateham and F. R. Elliott served as secretaries,—by the latter of whom, the present able report was chiefly drawn. A valuable feature consists in the various recorded opinions from the different delegates given in relation to each fruit. This mode of communicating information cannot fail in any case to be useful, and it is commended to the attention of future conventions elsewhere.

During the two days, more than eighty varieties of apples were examined and discussed, including mostly old or known sorts, good and bad, with some new seedlings. Of the latter, several outline figures are given.

Besides the record of the proceedings, there is an elaborate and valuable paper from F. R. Elliott, on the fruits already proved in northern Ohio; a very interesting communication from C. Springer, on the fruits of central Ohio, and the changes wrought upon many well known varieties by the soil and climate of that region; and an excellent paper by Prof. Kirtland, on the use of *special manures* for fruit trees, with a statement of some very successful experiments with their use.

The following list of apples, was compiled by the secretaries from the reports of the Convention for the two years it has been held, from the characters given by the members; it cannot fail to prove valuable to Ohio fruit raisers, and interesting to cultivators elsewhere, as showing the changes wrought by different localities in some of the best standard varieties:—

I. First rate, *and deserving further attention.*

Early Harvest,
Summer Sweet—in southern O.,
White Juneating—on account of early ripening.
Large Yellow Bough,
Summer Rose,
Early Strawberry.
Red Astrachan—only for market culture,
Summer Queen.
Golden Sweeting,
American Summer Pearmain,
Lowell,
Jersey Sweeting—not known in southern Ohio,
Porter,
Fall Pippin—by majority—some dissenting,
Cooper,
Fall Wine,
Rambo,
Westfield Seeknofurther,
Belmont or Gate—except in some sections of south Ohio,
Yellow Bellefleur,
Esopus Spitzenberg,
Am. Golden Russett,
Roxbury Russet,
Willow Twig—only as a keeper,
Green & Yellow Newtown Pippins,
Swaar,
American Pippin—only as a keeper.

II. Second rate—*or good for cooking purposes.*

Genetting,
Early Chandler,
Gault's Belleflower,
Summer Cheese,
York Russet,
Maiden's Blush,
20 ounce apple,
R. I. Greening--except for some few sections and until experiments can be tried in manuring it with ashes, &c.
Sweet Pippin,
Gloria Mundi.
Gilpin or Romanite,
Baldwin—on account of dry rot,
Michael Henry Pippin,
Cracking apple,
Kaighn's Spitzenberg,
Black Apple,
Pumpkin Sweeting,
Limber Twig.

III. Third rate—*or worthless.*

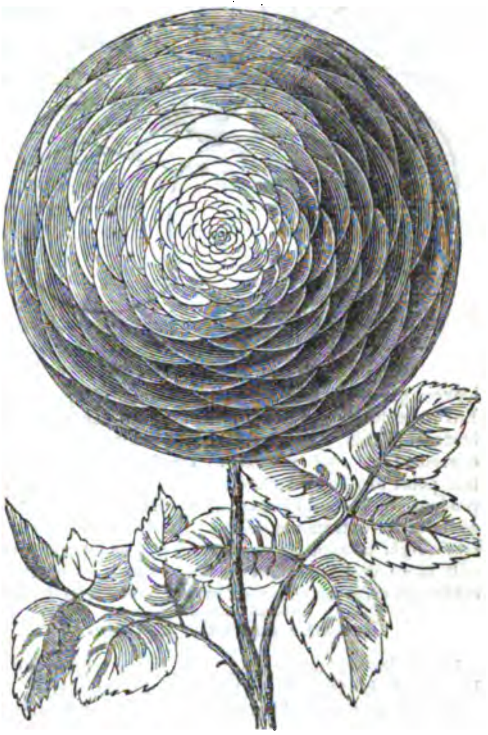
Augustine,
Slug Sweeting,
Gloucester White,
Prolific Beauty,
Colvert, or Pound Pippin,
Golden Gage,
Edgington,
Black Gilliflower,
Alexander,
Cheescboro Russet.

IV. No decided opinion expressed.

Tart Bough,
George apple,
Williams' favorite—not sufficiently known,
Spice Sweet,
Drap D'Or,
Trenton's Early,
Cathine,
Gravenstein — not generally known.
Dyer,
Wonderlich Spice,
Beauty of Kent,
Orndorf,
Late Strawberry,
Sweet Belleflower,
Kiler's Maryland Red,
Gabriel,
Hicke's winter sweet, Springer's Seedling, and other new seedlings,
White Pippin,
Federal,
Seeknofurther of Coxe,
Polly Bright,
Newark Pippin,
Roman Stem,
Pomme de Niege,
Winter Cheese,
Winter Pearmain,
Fall Harvey,
Western Spy,
Flushing Spitzenberg,
Danvers Winter Sweet,
Carolina Red Streak,
Cuble's Gilliflower,
Peck's Pleasant,
Brabant Bellefleur,
Ribston Pippin,
Ohio Nonpareil,
Cumberland Spice,
Red Calville,
Laquier.
Scarlet Pearmain,
Court of Wyck,
Scollop Gilliflower.

The Perfect Rose.

The astonishing improvement effected in the Rose by skilful and scientific cultivation cannot be appreciated but by those who have seen the finest specimens. The neat and delicate forms which some of the best assume, is in striking contrast with the old, loose, irregular, semi-double varieties. As a specimen of "a perfect rose," in form, we have copied the above figure from *The Horticulturist*, for although it has not been very closely approached in its accurate circular form, yet we not unfrequently find specimens of some of the best varieties, and particularly of some of the hybrid China roses, quite nearly imitating it in the beautiful and regular imbrication of its petals.

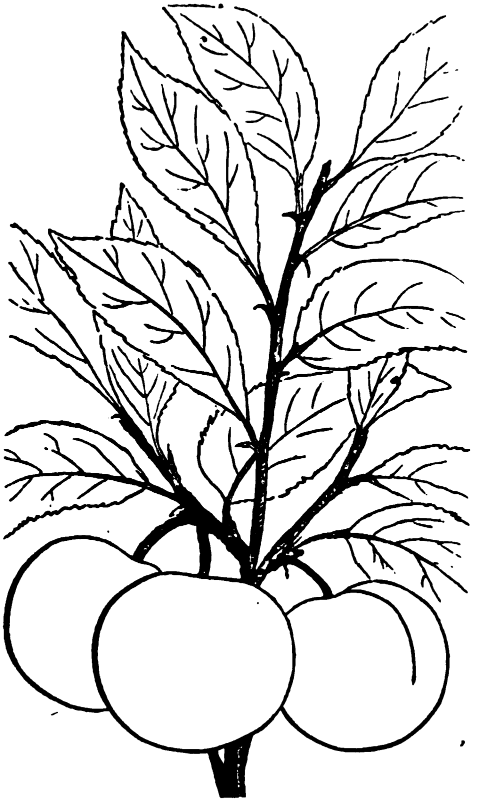


36—The Perfect Rose.

The Cherry Plum.

This pretty and very early plum, is quite different in its character from our other cultivated varieties, being in itself a distinct species, (*Prunus cerasifera*,) and is supposed to be a native of North America. The tree is thorny, has a small bushy head, and bears small, pointed leaves.

With the exception of the White Primordian or Jaune Hative, it is the earliest plum known; and although of only pleasant flavor, it is valued for its ripening at midsummer, when the brilliant scarlet surface of the fruit, contrasting with the dense and dark green leaves, gives the tree quite an ornamental appearance. But its value is greatly lessened by its scant productiveness. This difficulty, we are informed, has been overcome by *root pruning*. Further experiments on this point are needed; and if it may be thus rendered productive, it would prove a valuable variety, on account of its extreme earliness. Its little liability to the *leaf-blight* is another characteristic, which renders it still more desirable that further experiments may be made towards the increase of the amount of its crop.



37—THE CHERRY PLUM

Remarks on Fruits in Ohio.

The following interesting facts are drawn from the Report of the Ohio Fruit Convention of 1848:—

Fire Blight.—C. SPRINGER, speaking of fire-blight, remarks, "Experience satisfies me, that if we would succeed with the *pear*, we must either select such kinds as are naturally of slow growth, maturing their wood as they proceed, as the White Doyenne, Seckel, and others, or we must set them in thin soil. On dry hard points or banks, which have little moisture, they will advance moderately. I have seen fast-growing trees, thus situated, remain for more than twenty years, unscathed by blight, while the very same kinds, in moist rich soils, in sight of them, were soon exterminated." In one instance, however, it is stated, that pear trees succeeded finely on low ground, but it was found that the subsoil was a dry bed of sand.

Special Manures.—Prof. KIRTLAND states that on a worn out piece of land, that would not produce wheat, pear trees would not grow more than two to six inches in a season, apples but little better; but the peach and cherry flourished finely.

Gypsum, clover, leached ashes, and a little barn manure, in two years, brought plenty of straw, with only 11 bushels of wheat per acre. A second plastering, clover turned in, barn and slaughter-house manure, and phosphate of lime, brought, without increasing the straw, 19 bushels of excellent wheat per acre. Phosphate of lime, ashes, barn manure, with a little salt, caused the pear trees to grow freely and bear well.

Rawle's Jannet.—C. SPRINGER says that this celebrated apple, "in March and April, is hard to beat for cooking and eating. The tree blooms ten days or two weeks later than most apples, and, in consequence, once in ten or fifteen years, makes a splendid hit at bearing when all others fail [from spring frosts.] The objection to this is, there are too many knotty and under size."

Baldwin.—"This fruit, one of the best winter apples in Connecticut and Massachusetts, when raised at Marietta, in this State, is but a temporary fall fruit."

Royal George Peach.—F. R. Elliott says, "I cannot see any thing in this variety to recommend it."

Early Tillotson.—"This fruited as early as Early Anne, and is a much superior fruit, decidedly the best very early variety." F. R. Elliott.

Crawford's Early.—"I have seen this beautiful and large peach in New Jersey, but the specimens grown here equal, if they do not surpass, any I have seen in its native state. Several specimens measured ten and a-half inches round, *none less than nine inches*, and some eleven. It is a rich golden yellow, with clear, rich red to the sun." F. R. Elliott.

Transplanting Evergreens and other Trees.

EDS. CULTIVATOR—In the third number of this year's *Farmer & Mechanic*, I found an article entitled "Transplanting Evergreens," credited to *The Cultivator*, which has induced me to send you this communication. There are three methods recommended in the article in question.

The first—"to cut a trench late in the autumn around the roots of the tree to be removed, leaving a ball of earth about the roots, proportioned to the size of the tree; after this is frozen, and during the winter, the trees, with the frozen ball of earth, are to be lifted by the aid of a stout lever. They can then be drawn upon a sled and placed the north side of a barn, or other building, and having straw, old hay, or saw dust packed about the frozen balls, they will remain unthawed, till the proper season comes round to set them out."

By the other two methods, the ball of earth is to be raised without freezing; in the one case to be tied up in matting, and in the other, to be allowed to freeze after the tree with the ball has been raised from its natural position to the surface. These last methods may do very well for small trees, but for the transplanting of larger ones, the first is much to be preferred; for a ball of earth sufficient to contain the proper quantity of roots for a large tree, could not, when unfrozen, be raised from the hole in which it stands, without breaking it.

The objections to the first mode suggested, are—1st. A second lifting of the balls of earth, and transporting to the place of setting out. 2nd. Where a large number are to be transplanted, particularly large trees, it would be difficult to find room enough on the north side of a barn; or hay or straw enough to cover them without using a rick.

I have had much experience in the transplanting of trees of all sorts, particularly evergreens—60 or 70 each winter for several years, and have been very successful, and if it will not make my article too long, I propose to give the details of my method for the benefit of your readers. It is the same as that first mentioned, except that I plant the trees as soon as moved. The chief labor and difficulty consists in placing a heavy ball of earth, weighing from 1 to 6 tons, upon the sled (or rather stone boat, for I find that far preferable,) and once there, I do not want to remove it, except to be placed in the hole where it is to remain permanently. To be able to do this, cover the ground six inches deep with stable manure and litter in a circle 8 or 10 feet in diameter, on the spot where the tree is to be set. There will then be no difficulty in digging the hole when necessary, for the manure will have kept out all the frost, and you will have fresh, dry and warm mould to place about the tree for the young fibres to run into. If the soil be not good, another spot (beside an old stone fence, or on the *turning* of a field,) should be kept free from frost to dig good earth from. The best mould that can be had should be used for this purpose—it makes an *immense* difference in the subsequent vigor of the tree. After the tree is planted, and the hole nearly filled up, the manure may be spread on the top, and that again covered with earth. It retains the moisture and nourishes the young fibres the next summer without injuring them. Where a heavy fall of snow occurs early in the season, followed by a few nights of cold weather, THEN go to work *at once* to transplant, and half the labor is saved. The trees may be dug round, (for the snow will have prevented the frost from penetrating deeper than can easily be broken through by a pick-axe,) allowed to freeze one or two nights—and the less frozen the better, if they are only hard enough to bear the rough usage they must get—and then be set out at once.

I have transplanted trees of all kinds with stems from the size of my arm to twenty inches in diameter at the butt, and from fifteen to thirty feet high. Evergreens—at least, white pine, red cedar and hemlock, for my experience extends no farther—are the easiest trees to transplant, as they require little or no watering the next summer. Next in order, come the various kinds of elm, maple and poplar. Birch, chestnut and locust are more difficult. I have lost one out of three. Oak, hickory and beech, may as well be left undisturbed in the woods, unless taken small—say, the size of a man's arm and under. All these require watering copiously during the dry weather of the next summer, and some water the summer after.

I do not raise the ball with levers from the hole, but having broken it entirely loose at the base with levers, crowbars, &c., I hitch the oxen, by a long rope, to the stem of the tree above the branches—protecting the tree from being hacked by the rope—and then turn it down on its side. An inclined plane having been cut on one side of the hole, the stone boat is run under the ball, now lying on its side in the hole; the tree is uprighted, bringing the ball into the stone boat, the oxen are hitched to the boat, from one to three and even four yoke being sometimes necessary, and the tree is carried off standing upright. At the side of the hole where it is to be planted, it is again turned over and rolled or "cut" into its place: be careful to see that it stands perfectly straight and presenting the best side to the point from which most seen.

Should this communication prove acceptable, I will send you, another time, a much easier method of transplanting large trees from swampy ground, without freezing the balls of earth. A BOOK FARMER.

Apple Trees from Cuttings.

EDS. CULTIVATOR—In your publication of October last, there is a short article headed "Horticultural Humbugs," and the first you mention is, that "the insertion of apple grafts in a potato before planting in the earth, insures the growth." That apple grafts will not grow like the cuttings of gooseberries and currants, whether planted in a potato or any way else, I believe to be a general truth, but perhaps not absolutely so. Some particular kind of tree, under particular circumstances, *may* have succeeded by planting the graft in a potato, which may have given rise to the statement at first.

Your article brought fresh to my recollection, a fact which came under my own observation, and which I shall now relate. I spent the fore part of my younger years in the west of Ireland; while there, I was told that there was a certain kind of apple tree which could be propagated by planting cuttings in the ground the same as the gooseberry; there were small knobs on the branches; and when twigs were cut off below one of these bulbs, and planted in the ground, roots struck out from said knobs, and trees were produced, same as the parent stock. Having my doubts on the subject, I resolved to put it to the test. I procured a suitable twig and planted it in my garden, and no doubt it did start, and grew well, but that is not all. The said twig happened to have a fruit bud upon it, which not only blossomed out, but a full sized apple was matured to perfection on it that same season. Now had I not seen this with my own eyes, and done it with my own hands, it is more than probable I would have been as skeptical as you on the subject, and concluded the whole a humbug also.

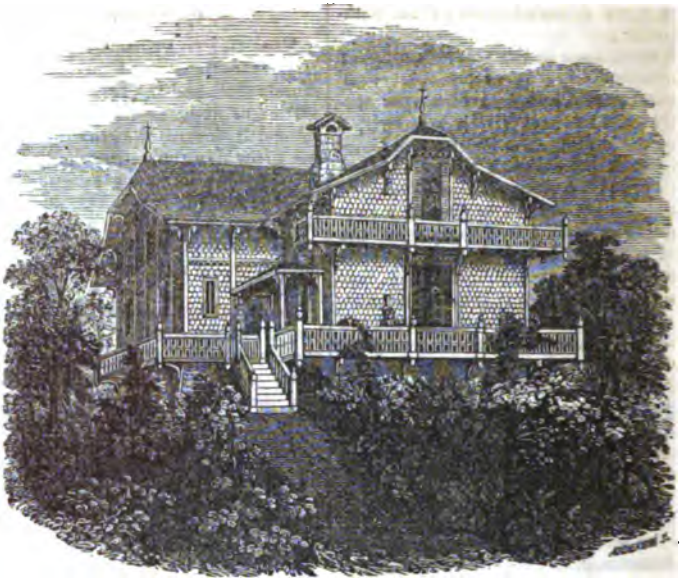
What became of the young tree, I cannot tell. I very soon afterward left the place, and forgot all about it. It may be a good bearing tree to the present day. The fruit, as far as I recollect, was good, and worth propagating, and now, since the matter has been brought to my recollection, I intend to write over for a few grafts from some of these trees, and if I succeed in obtaining them, and live to see the result, you shall be duly informed. WM. FREELAND. *Brockville, C. W.. Jan.*, 1849.

Large ear Tree.

EDS. CULTIVATOR—While on a recent tour along the valley of the Susquehannah, my attention was called to a pear tree standing on the bank of the river, near the upper line of the Sheshequin flats, in Bradford Co., Pa., on the farm of George Northrup. I was informed that one of the oldest settlers of that region, while accompanying Gen. Sullivan, on his expedition against the Six Nations, in 1779, found this tree surrounded by an orchard of some three acres. Orders were given to cut it down—but he begged for the preservation of this pear tree, and it was spared, it being the only fruit tree saved. I am told that it then measured, 2½ feet from the ground, 15 feet in circumference. In growing, it had formed a crotch five feet from the ground; one part has split off and decayed.

About one-third of the tree is still standing, and alive, but quite rotten on the inside. It now measures four feet in diameter, (that is, by measuring across the inside of the slab which still remains,) and 9½ feet in circumference, and bore, last season, two bushels of fruit. The inside of the part standing is quite dead—only the bark, a thin shell of the body, and a few limbs, show any symptom of life. E. C. FROST. *Seneca Lake Highland Nurseries, Catharine, N. Y., Jan.* 1849.

Keep cattle off the fields, when the ground is so soft that they will poach it with their feet.

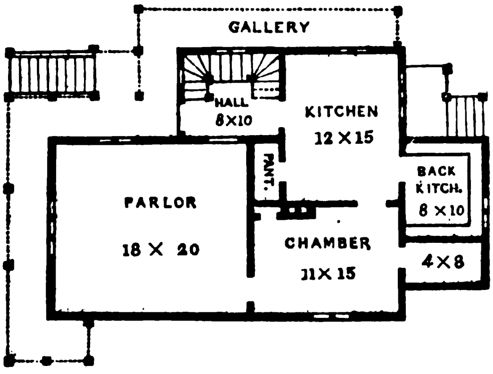


38—PERSPECTIVE VIEW.

Rural Architecture.

A Swiss Cottage.

The above is a representation of a cottage in the Swiss style, erected by E. P. **Prentice**, Esq., at Mount Hope, near Albany. It is placed on the side of a considerable eminence, which gives an appropriate site for a building of this picturesque and somewhat wild character. It is a style evidently adapted to a country of varied and uneven surface, and we think might be introduced with excellent effect in our hilly and mountainous sections. Though especially tasteful and ornamental in such situations, it admits of equal conveniences for household economy and comfort, as any other style, as will appear by an examination of the plan herewith presented. It is proper to remark that there are three good bed rooms on the second floor.



39—GROUND PLAN.

The external covering of the house is shingles, which are cut to a pattern before being laid, so as to give the appearance represented in the engraving. The frame of the house was first covered with rough weather-boarding, on which was laid a covering of tar-paper,—a cheap but useful article for such purposes, rendering the house warm and dry.

The plan of this cottage was designed by Mr. **Prichard**, an architect of Albany, who also designed several other handsome cottages, erected by Mr. **Prentice**, which have greatly ornamented his estate, and added much to the interest of the neighborhood.

The Farmer's Note-Book.

Indian Corn as Food and as a Crop.

BY PROF. EBENEZER EMMONS.

I believe the value of Indian corn has never been over-estimated. Possessing in itself every element which is essential for sustaining life, to supply the waste of the system which it continually undergoes; and being at the same time easily assimilated, it seems to unite in itself those properties which render it one of the most important productions of the soil.

But this does not comprehend all that may be said upon its value; we have reason to believe that many of its varieties may be employed for special purposes. Some, possessing a higher value for fattening, others as a common nutriment, in which the balance between the calorifient and nitrogenous matters are nearly equally preserved, and others still, in which the nitrogenous matters considerably exceed the fat-producing or calorifient matters. Indian corn, however, has rarely, if ever, been cultivated with a view to obtain from it the special advantages which its varieties possess. Indeed, if we may judge of the views of writers upon this subject, we are rather led to believe that Indian corn in its composition, is the same in all its varieties; and it may be true—indeed, ought to be true—that this grain should possess within certain limits, a composition of its own, and which is not essentially different in its varieties. Still, it is found on analysis, that some kinds are better adapted to special purposes than others, and without doubt, considering its readiness to form varieties, we have reason to suppose that if attention was turned particularly to this object, we should obtain, as we may other products, varieties which for particular purposes, would be more valuable than any we now possess. As they are now found to be constituted, some, as I have already indicated, possess advantages for particular purposes which others do not, and for which farmers might employ them in preference to others.

Hithertoo the analyses have been too few and too imperfect to determine the special advantages I have referred to. Professor Playfair's analysis has been often quoted for the purpose of showing its nutritive powers, and I may be permitted to refer to it here, along with M. Payen's and Dana's, the two first of which may be regarded as erroneous, or as only distant approximations to the truth. Thus they state respectively its composition, as follows:—

	Playfair.	*Payen.*	*Dana.*
Protein,	7.	4.60	12.
Fatty matter or oil,	5.	35.60	77.09
Starch,	70.	28.40	
Water,	12.	....	9.
Coloring matter,	..	.20	
Dextrine,	..	2 00	
Cellular tissue,	..	20.00	
Various salts,	..	7.20	1 31
	100.	98.20	99.40

Some of the discrepencies in the foregoing analyses are undoubtedly due to errors in the work. For instance, the 35.60 oil in M. Payen's, and the large amount of cellular tissue. So the protein compounds in both Payen's and Playfair's are stated too low. The starch is also too high in Playfair's analysis. It is evident he includes in it the fibre or cellular tissue, and was probably induced to do so from its close similarity in composition to starch, and its uses in the animal economy. Some allowance in these analyses should be made for difference in varieties which they respectively used; as it would be quite singular if the same kind was employed in each case. That varieties are different in composition, to a certain extent, appears from several analyses which I have carefully made, and which I will now state, selecting those which exhibit certain extremes in their constitution:

	No. 1.	No. 2.	No 3.	No. 4.
Starch,	49.22	41.85	11.60	53.40
Gluten,	5.40	4.62	4.62	3.22
Albumen,	3.32	2.64	6.69	8.90
Casein,	0.75	1.32	5.84	1.00
Oil,	3.71	3.88	3.00	2 80
Fibre.	11.96	21.36	11.24	3.28
Dextrine,	1.89	5 40	24.82	3.41
Sugar and extract,	9.65	10 00	8.00	9·60
Water,	14.00	10 00	10.32	12.55
	99 80	101 07	100.96	99.88

The *first*, is the large, eight-rowed yellow; the *second*, the large Ohio Dent; the *third*, sweet; and *fourth*, the calico corn.*

If we compare the foregoing analyses with each other, it will not escape our notice, that the calico corn contains the most starch and the least fibre; and that the sweet corn contains the least starch and the most dextrine and nitrogenous matters. The Ohio corn ranks the lowest in the nutritive or nitrogenous matters. The fibre, it is possible, may not have been perfectly separated; still, judging from its coarseness, I believe, in this respect, it is not far from the truth. Its dextrine is greater than the other, excepting sweet corn, and it will probably be found that all the indented kinds contain more of this element than those which are full and plump, as the dextrine is a substance which shrinks in drying, like gum arabic. The above specimens of corn were the growth of the past season, and as they were not all equally dry, a slight difference appears in the amount of water which they respectively contain. The fattening property of Indian corn has been attributed to the oil of the grain, and its amount has been usually spoken of as indicative of its power in this respect. Those, however, who have been in the habit of feeding this grain, will hardly accept of this element as being at all indicative of its value for this purpose. We certainly cannot account for its effects in fattening animals, if its oil alone was to be taken into the account. We have, on the contrary, sufficient grounds for believing that its *starch* plays a very important part in this process.—(*To be continued.*)

Improvement by Draining.

Eds. Cultivator—Since Mr. Howard was here, in June, 1847, I have dug over 1200 rods of drains, and the greater part is laid with tiles. I should have had 800 rods more done, if I could have got tiles enough in the fall. But I have now made arrangements by which I expect not to be disappointed in the future.

There is certainly, no way that a farmer can expend money that will yield so much interest as in draining wet, moist, or even *damp* land—especially if he intends to grow winter wheat. If the land is what is called wet, and of easy drainage, (I mean such as has a porous subsoil to the depth of two to two and a-half ft.,) the additional crop of wheat or Indian corn, the first season, will do more than pay the outlay in draining, and on moist or damp soils, where more wheat will grow than on wet soils, it may take the additional crop of two seasons to pay the cost of the drainage; but on *hard-pan* land, (that is, where the hard-pan comes within eight or ten inches of the surface,) I think the time has not yet arrived that we can drain such land profitably, in this country; but on all lands that can be worked with a spade two and a-half feet deep, it will pay well to drain, if the soil is injured by surface water.

My drains have cost me about forty cents per rod, all finished; but I have now made a contract for tiles at a cheaper rate. I am also, going to lay *pipes* two inches in diameter and fourteen inches long, which will answer all purposes, except where there is considerable run of water. The cost of the pipes will be less than that of the tiles, and by filling the drains with the plow, (I have always filled with the shovel till last fall,) I think I shall be able to finish my drains for 30 cents a rod.

Last fall, I exchanged ten acres of land with a neighbor. I got ten acres of wet land for ten acres partially drained. I made the exchange in order to get an outlet for my drains, through the ten acres I obtained, part of which was so wet, that when I made the exchange, cattle and horses were liable to mire on it; and it produced only course wild grass like the wet prairies of the West. The day I made the exchange, I set six men to ditching the new piece, and now a pair of horses will draw a wagon loaded with two tons, over any part of it that is drained, and by far the worst of it is done. The eyes of my neighbors are on that piece of land, and it would grieve me were I not to succeed with it; but I have no doubt I shall make it as good land for grass or summer crops as there is in the state of New York.

I am sanguine that the crop of wheat could in many instances, be doubled or more than doubled by thorough draining. I am aware that damp or moist land is by some held to be best for oats. I do not admit the correctness of the idea. In the first place, such land is frequently situated in hollows, where it has the benefit of the wash of uplands, and of course has become rich at their expense, and another thing, the dry land, in this part of the country, is almost always hard run with wheat, and generally brings a fair crop, which damp or moist land seldom or never does. For these reasons it has every possible chance to bring a bulky crop of oats, when the season suits. But let the dry land have the same rest with the damp land, and in nine cases out of ten, I have no doubt that the former will produce the heaviest crop of oats. The damp soil may produce the largest bulk, but put them on the scales, and the latter will be found wanting. Such is my experience. And with grass, also, wet or damp land generally produces the largest bulk; but every man that has pitched as many loads as I have done, knows that the hay from dry land is double the weight of that grown on wet land, when the produce of both is in the same state of dryness; and the feed, as well as the hay from dry land, is far more nutritious for any kind of stock.

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* The calico corn is a variety similar to the Tuscarora, except that the former is variegated in color, and the latter is white.—Eds.

I would say, therefore, drain, for the good of all crops, and for pasturage. It often grieves me, (or I might say *vexes* me,) to hear gentlemen whom I highly respect, and who profess to take science as their only guide in farming, say—"Is there no danger of making your land too dry?" Or—"are you not afraid that the most valuable salts will be drained from your farm?" Others say,—"We always look upon your farm as rather too dry." Thus, if I had not entertained strong faith in my own practice, I should have been deterred from draining by the opinions of others.

Stall-feeding Cattle.—Since Mr. H. was here, I have built large barns, sheds, and cattle-stalls, and have enough to fill them all; and when I get 2,000 rods more of drains made, I have no doubt I shall require more barn room. I have fifty excellent steers, 3 years old last spring, feeding for some of the eastern markets. They were all, with one exception, fit for the butcher, when I commenced feeding hay and meal. I intend to feed them till March or April. John Johnston. *Near Geneva, N. Y., Dec.* 21, 1848.

Indian Corn in Ohio.

Eds. Cultivator—There is no branch of agriculture in this country, and especially in the West, which engrosses more toil, and is worthy more attention than corn planting.

Maize, or Indian corn, is, perhaps, the most economical, healthful, and abundant food, which God, in his goodness, has provided, in these last days, for the sustenance of man. And yet there is no crop in which a greater diversity, and perhaps it may be added, a greater want of the necessary culture exists.

In the great valley of the Mississippi—the fertile soil and genial climate almost everywhere to be found, produce this crop in profusion, even with indifferent cultivation. It is, however, true here as elsewhere, and of this crop as well as others, that increased attention and well directed labor are amply requited. Of course, no general remarks could be applicable to the whole valley—for it is a world within itself. Upon the broad prairies, where the sward, which for ages, has been the pasture of the wild horse and buffalo, is broken up by the heavy teams and massive plows necessary for the work—the planting and harvesting is all of toil, which remains in order to ensure a fair crop for a number of years.

Upon our most fertile and extensive valleys,—the Wabash, Miami and Scioto,—owing to the nature of the soil, far less labor is necessary to produce a tolerable return, than in the less favored corn regions.

Ohio is made up of hills and valleys—small valleys generally, with some little champaign country;—and the general interests of our state call for the cultivation of a variety of crops, and the practice of a well chosen rotation.

The course adopted upon my farm, is to turn under a green sward for corn—follow with wheat, seeded with clover and grass—mow one year and pasture the next—then turn under again for the next series—this is, of course, varied according to circumstances.—I have one field, which for twenty or thirty years, has been in corn almost all of the time; and I shall plant it again next year, it having yielded a great crop the present season; but this, like much of the land along our larger water courses is frequently overflowed—and last year there was a rich deposit from the waters of the Muskingum, of some four inches of earth.

Others here adopt a system, which seems very advantageous to the sheep-growers, of sowing rye among the corn at the last working, and keeping it for March and April pasture, turning under what of the sward remains for a second crop of corn. This is found to work well upon rich bottom lands, where wheat is a precarious crop, and the green feed thus furnished is invaluable either for sheep, cows or horses.

The most common mode of culture is to plow the ground but once before planting—yet when foul with weeds, we turn under in the fall—and I have found some benefit from this course upon some soils—especially where tenacious—if the ground is very uneven and lumpy, it is harrowed and sometimes rolled.

Planting is performed in a variety of ways—some furrow out, with a small plow, four feet apart each way, others three and a-half, leaving from three to five stalks in a hill—and yet others furrow but one way, and drill plant from ten to twelve inches apart in the row. A plan which I have adopted with some success is, to furrow four feet one way and two feet the other, leaving but three stalks in a hill—in this case it is worked, first, in the wide rows; second, in the narrow ones—and after that, entirely in the wide ones.

We cultivate, generally, the first time with a cultivator or fine harrow—sometimes with a plow—the two following workings are performed with a plow—not a few using the old fashioned shovel plow. If the ground is fresh, or if rye or wheat is to be sown very early, the cultivator or plow is used for a fourth working; the crop is then laid by—*made*, as our southern neighbors call it.

In September, it is ordinarily cut up and set in shocks ready for husking; the ground is then ready for plowing and sowing in wheat.

In November and December, the corn is husked, and the corn fodder ready for use; and is either drawn to some convenient yard, or set in large shocks in the field, ready for drawing out as the stock may require.

We raise about sixty-five bushels upon an acre of bottom lands, with fair tillage. Our premium crops this year, upon hill lands, were one hundred and eighteen bushels of shelled corn per acre, with superior culture.

The average price of corn here is twenty-five cents.

We most respectfully solicit suggestions. D. E. Gardner. *Marietta, Ohio, Jan.* 1, 1849.

Subsoil Plowing.

I have made several experiments with the subsoil plow, one or two of which I will state. In the spring of 1848, I subsoiled a strip of twenty feet in width through the middle of a field of Barley. At the time of cutting the grain I measured eight different pieces, each piece exactly the size of the other. I then cut, shelled and weighed each parcel separately. Four of the parcels were from the subsoiled part, and four from the part that was not subsoiled. The ground was all alike; the yield on the whole was rather slim, but the parcels that I kept separate, weighed one pound in ten more on the subsoiled part, than those did on the unsubsoiled part. I endeavored to be as accurate and impartial as possible. The soil was dry and sandy.

In the spring of 1846, I subsoiled a strip some four feet wide, through the middle of a field, and planted to potatoes. They all rotted badly—were hardly worth the digging. The weather was very hot and dry through the summer; the ground so hard in the field that it was almost impossible to plow it, but the part that was subsoiled, plowed at least one-third, if not one-half easier than the other. A PRACTICAL FARMER. *Westchester Co., N. Y., Jan.* 27, 1849.

Cheese-Making in Virginia.

EDS. CULTIVATOR—I fear that a direct answer to the inquiries of your letter of the 6th inst., may place me in the false and unenviable position of "the scholar attempting to play the teacher." Allow me, therefore, to give a portion of the history, with such an "account" of my dairy as your inquiries propose to elicit.

In the year 1846, several gentlemen of the county adjoining this in which I live, and Mr. Jno. C. Underwood, of Herkimer county, in your state, determined to establish (each,) a dairy farm in this district of country. We began to purchase cows in the winter of 1847, and aided by the kind exertions of Mr. Underwood, we supplied ourselves with dairymen and utensils, from New-York, and commenced business the following spring.

I was, fortunately, enabled by the kindness of Mr. Underwood, and the recommendation of Mr. A. L. Fish, of Herkimer, to secure the assistance of Mr. H. M. Mattison, of Herkimer, and to his energy, patience, and knowledge of his business, whatever credit for success we may be entitled to, is altogether to be attributed.

In the winter of '47, we purchased our cows. Mine averaged me $11.48. I made my first cheese April 20th,—twenty-one pounds—from 9 cows. The spring was cold and dry, the grass backward, the cows, picked up wherever we could procure them, calved irregularly—many very late—and of course, in so irregular a dairy I cannot calculate the average yield, as calculated in old established dairy countries. I give mine as yielded by the cows at the pail, believing that your object is, not to contrast the yield of Virginia dairies with the yield in New-York or New-England, but to draw forth facts which may enable northern men to form an opinion upon the relative advantages offered by the north, and so far south, for dairying interests.

On the 15th of May we milked 21 cows, and made 53 pounds of cheese—feeding 2 bushels of shorts. On the 15th June milked 40 cows, made 108 lbs.,—fed three bushels of shorts. July 15th, 52 cows, 123 lbs., fed three bushels shorts. Aug. 15th, 58 cows, 150 lbs., fed four bushels shorts. The drouth, or rather its effects, were felt until this time, after which the pasturage continued fine through the season. Sept. 15th, 51 cows, 139 lbs. Oct. 23d, 118 lbs., and commenced making butter. Nov. 15th, 43 cows, 87 lbs. of cheese. Dec. 30th, 34 cows, 34 lbs. of cheese; and by the 1st January, we had made 25,244 lbs. weight from the press.

My cows averaged me in price, when bought, $11.48. I fatted on grass, after the 1st September, and sold in November, fifteen, at an average price of $20. We milked out of doors until about the first of November, when we got into our stable. The cheese-house we began to use in July. My cheese-house is 60 feet long by 26 feet wide. Water is conveyed to it in pipes under ground. The stable is 104 feet by 36 feet, with stanchions for 63 cows. The cows stand in the centre, with their tails towards each other. The space between the rows of stanchions is 16 feet. The side alleys 10 feet each. There is a cellar 24 feet by 36, under the barn, for manure, which is delivered from the stable through trap doors in the floor.

Through the year 1848 we kept 63 cows, and made 34,000 lbs. of cheese. I cannot lay my hands on my dairyman's butter account for either year. We fed whey with the shorts, keeping but few hogs. But we raised 25 calves the first, and thirty the second year. The cows had a range of nearly 400 acres of pasture, with abundance of water.

I established a second dairy last year, and shall establish a third the coming spring. The second has 40 cows, the third will have 63. The number of dairies in the adjoining county has been increased from three to six, and there is a great deal of land well adapted to the purpose. My neighbor, Lt. Col. Randolph, now offers for sale a farm of 316 acres, for $5,000, with a grist mill, and a meadow of 40 acres, about one mile from the village.

Our dairymen are all from New-York. We use the dairy stove, (having been unable to procure a steamer,) and I believe the only variance from the New-York practice in making cheese, is to scald and salt rather higher, which we think is rendered necessary by the length of our summers. ROB'T M. MARSHALL. *Happy Creek, Va., Jan.* 19, 1849.

P. S.—Our cows are considered by the northern dairymen who have seen them, as fairly averaging, in point of size and appearance, with the dairies of the north. R. M. M.

Warm Barns.

EDS. CULTIVATOR—So much has been said upon the necessity of keeping cattle warm in winter, that it might be supposed every farmer would have his barn warm and comfortable; but as we call upon neighboring farmers, we find many of their barns quite open, exposing their cattle to the wind and drifting snow. Many, doubtless, do not know how much more it costs to winter cattle in a cold barn than in a warm one, and that, at best. they cannot be made to thrive so well upon the same quality of food. The animal body acts as a furnace which must be supplied with fuel, and the greater the exposure to cold, the more fuel there must be to keep up the heat.

Capt. Parry, when wintering in the frigid regions, found his men lost their appetite for light food, and ate clear butter and grease, with a keen relish, and without the slightest inconvenience, and that their health and comfort required these articles of food in proportion as they were exposed to the rigor of the climate. Warmly clad travellers have found, to their great surprise, that the men in some of the northern tribes, who wear little clothing, will consume daily ten pounds of flesh, besides eating as freely of tallow candles as we do of apples. So it appears, that shelter and clothing, to a certain extent, answer the purpose of food. If we apply this principle to the wintering of stock, it is obvious a great saving may be made in hay. The cattle in the barn are so many furnaces that must be kept heated. If the surrounding medium is cold, there must be more fuel, or the cattle's flesh will be consumed to keep up the heat. The farmer, then, who has 20 tons of hay in a cold barn, may save at least one tenth of it, by expending a small sum in making his stables warm; and this saving he may make every year he fills his barn, besides having his cattle in a much better condition in the spring.

Farmers frequently buy hay in backward springs, paying high prices, when, if they had expended one-half of the money paid for the hay in fixing up their stables, they would have saved buying any hay, besides having their stables warm for future use. So the objection farmers sometimes make to repairing their barns,—that they are poor and in debt,—is the very reason why they should repair them. If they are paying six per cent. interest on their stock, they can ill afford to lose twice as much more in keeping it. Cold barns will make a *farmer* poor, as well as his cattle. A merchant or mechanic would grow poor fast enough if he wasted ten per cent of his stock. No wonder, then, farmers grow poor who waste often more than ten per cent. of all their hay, by keeping their cattle in *cold, open barns*. The farmer had better sell a ton or two of hay, (if he cannot do it without,) and get some money to make his barn warm.

We have seen cold stables made quite comfortable by boarding them up on the inside, three or four inches from the outside boards, and filling the intermediate space with straw. The front side of the stable should also be boarded up, leaving a space open to feed the cattle, which may be kept open or closed, according to the temperature of the weather. This is a very cheap method for those who cannot build new barns, or make thorough repairs upon old ones; and it is only necessary to have it accomplished, that the farmer should *go about it*. It may be done at any season of the year, in fair weather or foul. Farmers, in what manner can you more profitably invest a few dollars? You have, perhaps, a warm kitchen, and find it much less expensive providing fuel for it than for a cold one, besides being much more comfortable for your family. You will find there is as much economy in having a warm barn, as in having a warm kitchen; and although the comfort of your cattle is not to be compared with that of your family, yet it should not be forgotten. Could the dumb brutes speak, they would tell many sad tales of suffering;—yes, and they would *argue*, too, more *feelingly* than ever a stump speaker could, in favor of *protection*. John Tufts. *Wardsboro', Vt., Jan.*, 1849.

Kentucky Wild Lands.

Eds. Cultivator—I saw a piece in a late Cultivator under this head, praising the blue-grass pastures of Kentucky, and a careless reader might be left to infer that these wild lands would make such pastures. Too much praise cannot be bestowed upon the blue-grass pastures of Kentucky; and perhaps it may not be known abroad, that lands that will produce those first-rate pastures, are worth about fifty dollars an acre, whether in a wild or cultivated state. It is true there is much land in Kentucky that can be bought for ten cents an acre, and more than half the land in the state under ten dollars an acre.

Some years ago I bought a large tract of mountain land, at what I supposed to be a very low price. This land has upon it the finest timber, rich beds of coal, and abundance of iron ore. But I thought when I bought it, I could make of it a fine grazing farm. I sowed upon a small part of it, abundance of various kinds of grass seeds. The blue-grass and clover took well and thrived tolerably. But the blackberry brier, sassafras, dogwood, oak, and hickory, took better, and grew so that I had to clear the land every year. After a few years I gave it up, and for ten years past it has not yielded me one cent in rent or profit. The timber would be valuable if it was in the right place; so would the coal and iron be; but they are of no value there, because there are plenty of those articles in places that are more easily got at. If the timber was sawed into plank and lumber, it would cost as much to haul it to any place where it would sell, as it would bring. It is the same case with the coal, which would have to be wagoned seven miles over a bad road, and come in competition with coal mines upon the Kentucky river, with coal that is now sold at four cents a bushel.

I think it probable that some of the Kentucky wild lands might be made tolerable grazing lands for sheep, as the sheep would assist in keeping down the bushes. The bushes, if neglected one year upon my mountain land, would so overshadow the grass as to either kill it or render it so feeble as to make it worthless. The blue-grass succeeds best on the mountain slopes, below the limestone cliffs. The mountains upon my place are composed of limestone and sandstone rocks. The limestone occupies the first slope from the creek, and after passing up some distance the free-stone commences, and continues to the top of the mountain. The top of the mountain is generally capped with a perpendicular sandstone rock, varying from a few to several hundred feet high. Upon the top, where the ridge is level, the soil appears to me to be quite good for that region. I have made no experiment with the ridges, but suppose they will be found nearly as valuable for agricultural purposes as any part of the mountains.

The mountains are generally easily fenced, as those perpendicular sandstone rocks will afford most of it. I am acquainted with localities where thirty pannels of fencing will inclose five hundred acres, with the assistance of the cliff. Sam'l D. Martin. *Near Colbyville, Ky., Jan.* 3, 1849.

Culture of Spring Wheat.

Eds. Cultivator—Should you think the following method of raising spring wheat worth communicating to the public, it is at your service. My land is generally a gravelly loam, some of it pretty dry. I plow meadows or pastures late in the fall or early in the spring; be sure it is well done. Go on to it before sowing with the harrow. Smooth it down well; sow from four to five pecks to the acre, (Black Sea wheat.) When the wheat is well up, sow on from 80 to 100 lbs. plaster to the acre. I have never failed of raising from fifteen to 25 bushels per acre. There is one advantage in Black Sea Wheat; it never rusts or smuts, with me.

Owing to the continual wet weather the past season, while my wheat was filling, it was not so good as usual, though I never had a better growth; but it was badly lodged. Yield, about 18 bushels per acre. I have been in the habit for several years, of raising nearly all my grain on an inverted sod. Always plaster—sometimes throw on manure, and harrow in with the grain. If the land is rich, this will cause the grain to grow too large. I consider that while the sod is undergoing the process of decomposition, it facilitates the growth of any kind of grain, almost, if not quite equal to any manure whatever. Acting upon this principle, I turn over pastures and meadows often, and think every time I do so, I add a dressing of manure. Timothy Beaman. *Burke, Franklin Co., N. Y., Jan.* 16, 1849.

Offspring of the Buffalo and Domestic Cattle.

In an article on the American bison or buffalo, in our January number, we said that there had been instances of its having bred with the domestic cattle, but that, so far as we learned, the hybrid offspring was incapable of procreation. This, we believe, is the conclusion which has been generally held on the subject. For the purpose, however, of obtaining positive information on the point, we wrote to Thomas Allen, Esq., of St. Louis, Mo., who has very kindly transmitted to us the following letter, which he received in answer to an inquiry addressed to Col. O'Fallon. By this letter it will be seen that the progeny resulting from an union of the buffalo and domestic cattle, has proved fertile.—Eds. Cult.

Dear Sir—I am just in receipt of your note of the 16th, requesting information in relation to the cross of the buffalo with our domestic cattle. I once owned a half-blood buffalo cow, with a calf by a common bull, but was unable to domesticate her, which I attempted with the view of ascertaining how far the richness of her milk would compare with that of the domestic cow; its bag was quite small, as was its calf, which I raised to maturity. This cow with its calf, was brought to my farm with the greatest difficulty, from Jefferson county, in this State; but some two months after, in attempting to confine her, for the purpose of milking her, she broke away from all the force I possessed, leaped my post and rail fence, and returned through the city to her place of nativity, some thirty miles distant, leaving behind her calf. Hearing that she was there troublesome, I authorised her to be shot. My female buffaloes were inoffensive, tame and gentle; the males, when grown, were violent, vicious, and most dangerous; would readily break through any of my enclosures, or gates, in pursuit of my cows, preferring them to the buffalo cows.

In the course of twelve months, ten of my most valuable cows and heifers, having died, incapable of parturition; and my buffalo cows having also died from neglect or some other cause, I was induced to dispose of my bulls. No consideration would induce me again to own one. There cannot be a doubt that the cross of the buffalo with our cattle, is capable of procreation. J. O'Fallon. *St. Louis, Mo., Dec.* 8, 1848.

Early Peas.

This is the time to prepare for raising early vegetables. Hot-beds may be prepared for radishes, lettuce, cucumbers, tomatoes, &c. Peas may be planted in the open air, on warm ground, any time this month. We shall not be likely to have frosts of sufficient severity to kill plants of this kind, after the ground has been fairly thawed and settled. The *Prince Albert* is considered the best early variety of peas; next to this, the *Early Washington.*

A writer in *The Horticulturist* describes a mode of raising early peas, which is worthy of trial. He prepares troughs of rough boards, like a common sheep trough, eight feet long, and about eight inches wide at the top. These troughs are filled with good soil, and a row of peas planted in each of them. They are then placed in a green-house, or in a common hot-bed. His hot-bed frames are made in a cheap manner. He uses common cotton cloth instead of glass, for lights; which it is stated are as good as glass for most purposes, and cost only a fifth as much. After the cotton is stretched on the frames, it is made transparent and durable by coating it with the following composition: "three pints best old boiled linseed oil, four ounces white resin, and one ounce sugar of lead. The oil and resin must be a little heated to make them mix, and the sugar of lead must be first ground with a little of the oil, and then mixed with the remainder." A coat of this composition is given the canvass lights every season before using them.

It is only for *extra* early peas that it is recommended to put the troughs in hot-beds or green-houses. The writer alluded to says—"For my main crop of early peas, which I start about the first of March, I use nothing but the frame and the canvass lights which cover it. This gives warmth and shelter enough for peas; for a crop in the trough is growing every day with little or no attention, while in the open ground they have scarcely vegetated."

The mode of transplanting from the trough is described as follows: "As soon as the weather becomes mild and fine—say by the first of April, I prepare a spot in the kitchen garden, in which to *transplant* my early peas. This is very easily done by making a slight trench, just large enough to take in the whole trough—fill the earth up to the sides of the box, knock away the ends, and then carefully drawing out the sides, press the mellow soil up to the earth in the trough, as the sides are drawn away. By watering the troughs beforehand, and doing the work nicely, the peas will never know they have been transplanted." It is said that peas may be obtained in this way two or three weeks earlier than can be grown wholly in the open air.

Hussey's Reaping Machine.

In the *Ohio Cultivator*, I observed an article headed "*Hussey's Mowing and Reaping Machine—Hussey's Patent,*"—in which the editor informs his readers, that the patent, covering my "*cutting apparatus, expired a year ago,*" and that any one can now build machines embracing that principle. Ketchum, in particular, who has copied my cutting apparatus in his mowing machine, is urged to "*go ahead.*" The editor is rather too fast; it is true that my original patent has expired, but the subject of its extension is now before Congress, and has been reported on favorably, and may probably become a law. It is also true that a patent was granted to me in 1847, for an improvement in the cutting apparatus. This improvement is now considered indispensible, especially in mowing machines. As the improvement last patented by me is embraced in Ketchum's Machine, I do not see how he or any other person can "*go ahead*" in building Hussey's Mowing or Reaping Machines, without infringing on my rights, unless they confine themselves to my original plan, which is now considered an old-time affair, out of fashion, and of little account, when my late improvements can be had.

As the public appear to be uninformed on this matter, and liable to be misled by the article in the *Ohio Cultivator*, I deem it proper to make this statement, as well for the benefit of the public, as to relieve my private character from the imputation of fraud, with those who know me to be receiving compensation for my patent right in the reaping machine. Obed Hussey. *Baltimore, Jan.* 16, 1849.

Action of Lime.

Hon. John Delafield, in his address before the Yates County Agricultural Society, made the following remarks in regard to the action of lime. They are worthy the attention of farmers.

"Lime exists in plants in various proportions, viz:—32 per cent of the ashes of oakwood is lime; 27 per cent of the ashes of poplar is lime; 14 per cent of the ashes of peas is lime, and 4 per cent of the ashes of our wheat plant is lime. Lime is an essential constituent of wheat. It *must* therefore be in our soils, or our wheat never can be matured. Lime therefore is a *direct food* for wheat, and so also for other plants.—This important element of our soils possesses several qualities, most essential and highly beneficial to the farmer. For instance, where applied to heavy clay soils, it renders them more open and easily worked, admitting the action of the atmosphere.

"In all soils containing the sulphate of iron, lime will decompose the sulphate of iron, and thereby form plaster of paris; a material well known. When we apply lime in its fresh or caustic state, it acts as a solvent, destroys the texture of matter in contact with it, or changes its nature. But when by exposure to the air this power is lost, and it becomes slacked, then it is food direct for plants.

"Now as to the best method of using lime, farmers are not agreed; and with some hesitation I will state my practice and give my reasons. We see and know that twenty bushels of wheat, if produced from a single acre, will take from that acre about *seven* pounds of lime:—then as a bushel of lime weighs about 72 pounds in a caustic state, it will weigh when slacked, about 100 pounds by the absorption of water; therefore *one bushel* of lime is sufficient for *fourteen acres* of wheat or thereabouts, but as this supply is for one crop only, and as weeds and other vegetation will rob the wheat of its due share, I would apply ten bushels to the acre, and feel that it is sufficient for four or five years.

"It is true that farmers in this country have applied from 60 to 100 bushels per acre, and there may occasionally be a farm where such a dose may do good, but more likely to do harm; at any rate, for the reasons above stated, it seems a wasteful and expensive system. For light soils, I would recommend a mixture of lime and muck, say one bushel of lime to a cubic yard of muck, applying 20 to 25 bushels of this mixture to an acre. But never mix lime with your manure heaps; this is a ruinous practice, because it expels from your manure its chief power; it destroys the ammonia, a salt which it is our aim to preserve."

Berkshire Hogs.

I have occasionally seen articles in your paper decrying the Berkshire hogs, principally on account of their want of size. To such people you may say, that I have a barrow 3 years old, a full blood Berkshire, which will now weigh nearly 1000 lbs., live weight. He was weighed on the 3d of October, and then brought down 880; since which he has improved rapidly, and will doubtless reach the above figures. I have had this breed for seven years *pure*,—descended from hogs brought from Albany and Buffalo, and a boar imported by Mr. Fahnestock, of Pittsburgh, Pa., from England—(the latter a very large animal.) The stock have all been large and very profitable—weighing at seven to ten months old, from 250 to 300 pounds. Several individuals have weighed over 400, and the sire of this present one reached 750. This is, however, much the largest I have yet raised.

I regret exceedingly, that the breed is so unfashionable here, that I shall be obliged to look for a cross from other stock. WM. LITTLE. *Poland, O., Jan.*, 1849.

Protection of Working Horses—Horse Blankets.

EDS. CULTIVATOR—I am well aware, that I have chosen a subject, with reference to which, among farmers, there exists almost an infinite variety of opinions.

One will tell us, to keep work horses *warm and comfortable by means of close stables:* another says, let the stables be pretty *airy*—but, when necessary, blanket your horses. Another says, let your horses have *cold stalls*, for they will endure the cold much better, when taken from the stable. But it strikes us, that the most proper stables for work horses, are those, the temperature of which, is about the same as the surrounding atmosphere; with the walls or ceiling so tight, that cold currents of air shall not be permitted to blow directly on a horse.

There is little danger, I apprehend, of making stables too tight, provided they are well ventilated above.

When a horse has been out in a storm, either in the field or on the road, when he is brought into the stable, like to stand where the wind is continually blowing on him—no more than a laboring man who has come from the woods, in a cold stormy day, would like to have his either warm and sweaty, or cold and wet, he does not dinner table spread for him, in a bark shanty; and destitute of fire. And besides being unpleasant and uncomfortable, it is *decidedly injurious* and detrimental to the health of either man or beast.

It is a great fundamental principle in the physical world, and a fact well known to every chemist, that evaporation, whether it takes place from organized or inorganic bodies—from animate or inanimate substances, is a *cooling process;* and therefore, when the bodies of animals are exposed to wet and cold storms, they need to be protected from suffering injury, from the powerful influence of evaporation.

When I have been exposed to the wet storm, and my garments are filled with water, why do I not dry them on my person, instead of hanging them before the fire? Simply because there would be danger of contracting cold. If I attempt it, I soon perceive that evaporation takes place so rapidly, and such a degree of cold is generated, that my physical system is in danger of receiving a shock, which it is not able to resist or endure without injury; consequently, when nature has aroused its most vigorous reactive energies, they being inadequate to counteract the poweful influence of evaporation, it is obliged to yield to the preponderating influence; and to suffer the penalty of a violent physical law—*a cold*. But if I wrap myself in a thick cloak or blanket, evaporation is immediately checked, and the danger of taking cold is very much lessened.

Thus with the horse. Whenever he has been exercised so violently as to produce a profuse perspiration, he needs to be stationed where the wind will not blow upon him; (as a current of air is one of the prominent causes which influence and increase evaporation) and he needs to be covered with a blanket, until his hair has become so dry that he is not in danger of taking cold.

I know that there are many beings, who pretend to possess claims to humanity, who advocate that animals —horses, cattle and sheep, are so constructed that they can endure the exposure to cold and storms, and the sudden transitions from heat to cold, without injury:—but let the advocates of this theory prosecute their labors during a cold and stormy day, without warming themselves by a fire; and at night lie down upon a cold couch of straw, in an apartment where a good share of the window panes have been broken out—while old Boreas "tunes his harp high;" and prolongs his wintry notes louder and colder, and heaps the chilling snow upon their thin covering; and then tell us, whether or not such exposures endanger their health. Then let them tell us, whether or not, the howling storms of midnight are injurious to the flesh and blood of which dumb beasts are made.

When I commenced farming operations by myself, the stable in which I kept my span of horses, during the first winter, was quite open and airy—just right as many thought and said, to make animals *tough;* and the consequence was, my horses, which were young and high spirited, now, a good part of the time, appeared *much indisposed*. As the spring approached, each one of them run at the nose, and coughed almost incessantly. I doctored them for the distemper, strangles and the heaves; and when all means proved to be of no desirable efficiency, I began to inquire after the *cause* of their indisposition; and I deliberately came to the conclusion, that for the future, my horses should be better protected from the *cold wind and storms*. Accordingly, I built a new stable, and made the walls tight enough for a store room; and since I have kept my horses in this stable, they have kept in better condition—have eaten less feed, could endure the cold much better—and have not contracted such violent *colds*. I also made a couple of HORSE BLANKETS, of which no teamster should be destitute. I purchased two worsted blankets, about two yards and a-half long and a yard in width; and lined or covered them with strong cotton factory, which was two yards wide and two and a-half long. These were then extended on the barn and painted. After they had become sufficiently dry, a crupper, a waist belt and breast straps were sowed on them, and more *comfortable* blankets for horses I never saw. If a horse is obliged to stand in the storm, as is frequently the case, covered with such a blanket, he is kept dry and comfortable.

They are, also, an article of great durability. Six years ago, I made a pair for my horses; and I have used them with my team, summer and winter to ride on, and they will last six years more.

Perhaps India rubber cloth, lined with such worsted or woolen blankets, would subserve quite as good a purpose as oil-cloth;—but it is doubtful whether, with harsh usage, they would be as durable.

If farmers would be careful to make their stables more comfortable during the winter season, and to provide such blankets as have been recommended for their horses, when they are obliged to stand in the cold wind or storm, they would not contract such violent colds; which too often terminate in the *heaves*, or lay a foundation for some disease, from which the animal never recovers. S. Ed'wds Todd. *Lake Ridge*, *Tompkins Co.*, *N. Y.*

To Confine Hogs in a Wagon to remove them.

Hogs may be removed almost any distance in wagons without injury, by having a leather strap buckled tight round their bodies immediately back of the fore legs, to which another strap or rope is to be attached, to extend from the lower part of the body of the hog, to the bottom of the wagon, where it is to be made fast, and sufficiently long to enable the animal to stand up or lie down at pleasure.

By the more common method of drawing their feet together and having them tied tightly with a cord, they often suffer injury from lameness, beside the uncomfortable position in which it places them. P. S. *Burlington Co.*, *N. J.*, *Jan.* 29, 1849.

Cultivation of Potatoes.

Eds. Cultivator—I cultivate the Mercer potato as follows. I prepare the ground in autumn by ridging in yard manure. In the spring, as soon as the frost is out, I split these ridges and cross plow plain. I then bring on half-rotted (or more) yard manure and ashes in compost, and deposit this in heaps; the rows of heaps being five feet distant. These heaps are then spread to the breadth of two feet, and immediately ridged up. The ground between the ridges is then harrowed, and then furrowed out with a light machine, drawn by a single horse, having three large cultivator formed blades, at distances of one foot. This makes three deep drills, distant from each other 12 inches. A man then follows with gypsum and charcoal-dust, which is thickly sown. The sets or cuttings are then planted eight inches distant in the drills. These are all covered at once by a hand drag with teeth of such a form and size as will well cover the sets, and drawn by two men walking on each side of this bed of drills. Before the plants break ground, these beds are raked with iron-headed rakes and teeth 1½ inch long. This is a quick operation.

When the plants are well up, they are gypsumed; and when they are still upright, and before they begin to fall, the ridge of covered manure between the beds is split, and this earth and manure is taken up by the spade or shovel, and evenly spread amongst the potatoes in the bed, to the depth of two or three inches. After this operation, the space occupied by the ridge is planted out to cabbages, at three feet in the row. This is the whole cultivation which the potatoes receive.

It is absolutely necessary in this mode, in cutting the potatoes for planting, that the root and the sprout end of the potato should be thrown aside, otherwise they will not come up together, and in consequence will very much impede the raking and after culture.

Having refused the ends, I halve the middling sized potatoes, and quarter the very largest. These cuttings, I thoroughly dry by spreading in the sun for several days before planting. I never mind how early I plant. If I could get a chance, I would do it in February. By this method, I raised 300 and 310 bushels of Mercer potatoes to the acre, not mentioning the cabbages. In this mode, the ground is kept mellow and light, for there is no foot of man or beast set upon the bed after it is furrowed. The potatoes turn of uniform size, if the season is good, and the bed is a perfect mass of well formed roots; and there is not a quarter of the weeds commonly seen in potato crops. Yeoman. *Middletown*, *Ct.*, *Feb.*, 1849.

Variety of Indian Corn.

Mr. A. G. Moody, of Smithfield, Isle of Wight Co., Va. writes us that he has a kind of corn, called the "South Oregon corn," which he thinks more valuable than any kind he has before cultivated. This corn, it is stated, was brought into notice by the late President Harrison, who received it from the southern part of Oregon, in 1839. Mr. M. describes it as follows: "It is bright yellow; the ears long, with from 16 to 24 rows of grains to the ear; grains from half an inch to three-fourths of an inch in length, and very often longer; cob red, and of small size; stalk remarkably thick. The variety resists the drouth better than any I have noticed before." Mr. M. states that he has tried this corn two years, and he thinks it will yield thirty per cent. more than any kind he has cultivated. He says "it is an early variety, and thinks would suit the northern farmers admirably." In relation to this, we will remark, that it evidently (from the description,) belongs to what is called the southern or "dent" class, and would not, probably, be early enough for our latitude. It is, no doubt, a very good variety for regions to which it is adapted, though we see nothing strikingly different, (except the *extraordinary* length of the grains,) from the yellow red-cob corn that is raised in the southerly part of Ohio and in Kentucky. Mr. M. has some of the seed for sale, at two dollars a bushel.

Composts—Cheap Manure.

Eds. Cultivator—You ask about my compost heap. I live in a large manufacturing town, with a population of 12,000 or more. I have a cart with a tight box, holding 36 square feet. I send this cart out with my oxen, and give the parties driving and filling it 75 cents for a full load of night soil; having first made a basin of dry marsh mud, of which I have abundance, into which this night soil is emptied. We have several large founderies, that use much charcoal; the dust they cannot burn. This dust they give to me; and it only costs me cartage to bring it to my night soil. Again, we have several large factories, that use anthracite coal. I take from them their sifted ashes; this costs me nothing but carting.

Again, we have other factories that use half coal, half wood. For these ashes, I give one cent per bushel. Now I mix all these ingredients into a home-manufactured poudrette. I ought to have said, that to each load of night soil I add one bushel of Plaster of Paris, which, with the charcoal dust and plaster, will render it inodorous.

Next, I buy oyster shells at 3½ cents per bushel; burn them with cedar bush, from a mountain lot I own. One bushel of shells makes two of lime; but I cover the heap with an equal quantity of marsh mud, which, in fact, is a species of turf. And here I have a large source of cheap manure, at one cent per bushel. As for anthracite coal ashes, I am satisfied that on all my lands they are useful, particularly for a top-dressing for fruit trees; and on clay lands, they act mechanically in opening the soil, so that air can get down to the roots of plants.

Our soil is a red decomposed sand-stone; and lime acts most beneficially on it. I prefer small doses, say 40 bushels of slaked lime per acre, repeated every two or three years, with a bushel of Plaster of Paris per acre each year. I have found the waste of a flax-mill, after 12 months' decomposition, very valuable manure. L. L. T. *New Jersey, 24th January*, 1849.

The Veterinary Department

Diseases of Sheep.

SCOURS AND STRETCHES.—A correspondent (R. G.,) of Jefferson county, Ohio, wishes some information in reference to the cure of these diseases. He states that a neighbor of his has lost 75 out of 150 of his last year's lambs. It is said—"the disease was, perhaps, in the first place, induced by feeding on green frosted oats and clover, late in the fall. Their food and location have been frequently changed. The remarks, directions and remedies, by Mr. Morrell, have been observed and carefully attended to, but without any good effect. Once every day he selects from the main flock all those having any indications of the disease; and most generally his patience is again taxed the succeeding day in like manner. They sink down and die within a few days after the attack."

As to the *stretches*, our correspondent states that it "is troublesome, and fatal, amongst those flocks closely yarded, and fed exclusively on dry feed. However valuable Mr. Morrell's book on sheep may be, (*and I esteem it valuable*,) yet, in regard to his prescriptions for the above diseases, we have not found them of any value. In this latter complaint, the food becomes dry and compact in that part of the internal structure called the manyplus. And I have always found that the quantity of medicine necessary to act as an opiate on this dry mass, will kill the animal. If I am mistaken, I will take it kindly to be set right. A valuable suggestion which I have seen, perhaps in Mr. Morrell's book, is to feed pine tops. Those who are located where they can obtain them, by feeding once or twice a week, will not, as I now believe, be troubled with this complaint. At first, the sheep will reject the pine tops, or, at least, eat sparingly; but by keeping them before them, they will soon grow fond of them."

We should be glad to receive the suggestions of those who are acquainted with this subject. The feeding of pine and hemlock boughs, we have formerly practiced, and think it to be useful. ED.

Hoove in Cattle.

In a late number of the Cultivator I have read an elaborate article on "Hoove" in cattle. The first time I ever saw the disease was four years since, when a valuable short horned bull was affected. I first observed it about sundown one evening, when they were about stabling the other cattle. The persons then in the yard could not account for or explain the cause of the swelled appearance of the animal. I went to the house and resorted to the books, and discovered it was the "Hoove." The remedies recommended were not ingredients which the farmer keeps about him. About 3 o'clock, P. M., next day, I thought to look at my bull, and found him swelled to an alarming size. I then sought my manager, an Irishman; and on seeing the animal, he asked me if I had a bottle of gin, or "apple-jack." I brought him a bottle of good Holland. He led the bull out by the chain, affixed to a ring in his nose, tied on about a yard of rope, took him to a tree, and brought his head up nearly vertically, by throwing the rope over a projecting limb. I poured the contents of the bottle down his throat, and in two hours he was entirely relieved. In one other case I administered apple spirits, and succeeded in curing the animal. I believe it will be effectual in all cases; and is a remedy almost always to be readily procured. A PLAIN FARMER. *Paterson, N. J.*, 1849.

We have given spirits with good results, in cases of hoove; but in the incipient stages, we have found alkalies, as mentioned in the article referred to, a better remedy. EDS.

Answers to Correspondents.

FEEDING COWS.—D. M. To obtain the greatest quantity of butter from cows, in the winter season, we should prefer feeding them on early-cut hay, which had been well cured. In addition to the hay, we would give some meal. The kinds you mention, corn, oats, and buckwheat, are good. We would mix them in equal proportions, and feed each cow from three to six quarts per day, in two parcels, one in the morning and the other in the evening.

MR. CRISPELL'S FARMING.—"A Subscriber," Frederick, Md. In further answer to your inquiry noticed in our January number, we are informed by Mr. Crispell that he had 20 acres in corn which produced 1,400 bushels; 7 acres in rye (on corn-ground,) produced 49 bushels; 15¼ acres rye on fallow ground, 417 bushels; 10¼ acres oats, 300 bushels; 2¼ acres wheat, 30 bush.; ¾ acre flax, 8 bu. seed; 2 acres potatoes, 290 bu.; 32 acres meadow, 80 tons hay; 18 acres clover, (pastured) kept 25 head of cattle from 20th May to 1st September. Mr. C. says—"from the above, compared with my account of sales, it will be seen that I reserved for seed, keeping stock, and for family use, 500 bushels corn, 167 bushels rye, 100 bushels oats, 8 bushels wheat, 30 tons hay, 80 bush. potatoes, about 100 lbs. flax, and all my corn-stalks, except 10 loads. The number of cattle wintered was 29; horses and colts six; hogs ten."

MOCHA HOGS.—S. B. H. Providence, R. I. The variety of swine to which the name of "Mocho" (properly Mocha,) has been given, are said to have sprung from a boar introduced from the island of Mocha, off the coast of Chili. We are not aware that there are any full-bloods in the country. We have several times seen those which had more or less of the blood. They are not large, but small-boned, and fatten easily. We do not know that they possess any superiority over crosses of the Chinese, or various other breeds.

MUSTARD.—D. A. W. East Dorset, Vt. A deep rich loam is best for this crop. The method practiced on the Muskingum river, Ohio, is to sow the seed (by drill or hand,) in rows, two feet apart one way—the plants to be thinned to a foot apart in the rows. The crop to be kept clean while growing. The produce per acre is from ten to fifteen bushels, though as much as seventeen or eighteen bushels have been raised.

DEVON BULL.—S. M. N., Marlborough, Mass. We do not know where you could exchange your bull. If you conclude to obtain another, we would refer you to GEORGE PATTERSON, of Baltimore; L. HURLBUT, of Winchester, Ct.; R. COWLES, Farmington, Ct.; and E. PHINNEY, Lexington, Mass.

RYE MEAL FOR MILCH COWS.—S. Y. S. Chester,

N. Y. We are unable to point to any analysis showing the value of rye compared with Indian corn, for the production of milk. But we have found rye meal mixed with cut hay, an excellent article for feeding milch cows.

Improvement of Sandy Plains.—C. E. N., South Berwick, Me. Clay, ashes, decomposed or rotten manure, with clover, will probably prove the best means of improving this soil. Plaster is useful in situations where it will act. This can be ascertained by trial.

Corn and Cob-Crusher.—B. F. C., Rising Sun, Va. Freeborn's mill can be operated by two horses, and will grind corn or corn and cob into coarse feed. Price, $35.

Black Sea Wheat.—R. G., Willett, N. Y. We think this kind of Wheat maintains its superiority for hardiness and productiveness. It is considered a surer crop than most kinds of spring wheat. It is for sale at the Albany Agricultural Warehouse, at $2 per bushel.

Sunflowers.—L. B., Lexington Heights, N. Y. A deep loam is best for sunflowers. The seed may be planted in hills, after the ground has been prepared, as for corn, about five feet apart. When the plants are up a few inches, they should be thinned to three in a hill, and when they are a foot high, all but one should be pulled up. The ground should be kept clean with the cultivator. There are two varieties; one of which bears several flowers on branches of the same stalk, and the other a single large flower on the top of the main stalk. The latter is best. The seed is good for poultry, and for sheep. We have heard of 40 to 50 bushels being produced on an acre.

Domestic Economy, Recipes, &c.

Bread Pudding.—I noticed in the January number of "The Cultivator," a polite invitation to Farmers' wives and daughters to furnish for publication forms and recipes for cooking. My wife is neither a farmer's wife nor a farmer's daughter, but she has some taste in culinary affairs. For desert this noon, we had a "bread pudding," which I thought so nice as to inquire into the method of preparation. She sends you the following:

Take bits of dry bread—sufficient quantity to absorb three pints of milk, and form a smooth thick batter; add a piece of butter (melted) the size of a hen's egg, two beaten eggs, and the grated rind of a lemon. Bake about three-quarters of an hour. Eat with sugar and butter. J. B. *Springfield, Feb.* 6, 1849.

Eds. Cultivator—My wife sends a few recipes:

A Seasonable Hint—Snow Cream.—Take any quantity of cream, varying according to the number designed to partake—say a pint, more or less. Add pure snow, i. e., snow free from ice or hail, until of a proper consistence; stir in pulverized white (brown will do) sugar, sufficient to sweeten it. Apply a few drops of essence of lemon, vanilla or rose water. Eat before melted. This is superior to ice-cream, and accessible to any farmer, and a very innocent luxury.

To Manufacture Kisses.—Beat whites of three or four eggs to stiff froth; add one-half pound pulverized white sugar, and a few drops of essence of lemon. Of this, drop a teaspoonful on white paper, and place on buttered tins, and dry in a moderately heated stove. Cool and eat.

Mock Chicken Pie.—Boil common potatoes—season highly with salt and pepper; some prefer a little thyme or summer-savory. Pour milk over them, and stir till of a moderate paste; fill a pie dish with crust below and above the contents. Some strew pieces of pork through it. Bake in an oven, and serve hot. A single crust, filled and doubled, is called *turn-overs.* L. T. Duffell. *Jacksonville, N. J., Feb.* 7, 1849.

Agricultural Societies.

Delaware State Ag. Society.—A convention has lately been held, and a society organized in this state. Peter F. Causey, President; John D. Dilworth, H. Ridgely, T. P. McColley, Vice-Presidents; Manlove Hayes, Jr., Rec. Secretary; A. M. Higgins, W. Duhamel, P. N. Rust, Corresponding Secretaries; Wm. Burton, Treasurer.

Jefferson County, N. Y.—Officers for 1849. Moses Eames, President; E. S. Massey, Secretary; O. N. Brainard, Treasurer. At the last meeting of this society, premiums were awarded on the oat crop as follows; first premium, 110 bushels per acre; second, 90 bushels per acre.

Cayuga County, N. Y.—C. Gridley, President; John B. Dill, Secretary; C. Parsons, Treasurer; with one Vice President for each town in the county. The Society is in a flourishing condition.

Niagara County, N. Y.—Erastus Hurd, President; A. H. Moss, Lockport, Secretary. This society proposes to procure a lot on which to erect buildings and other necessary fixtures, for the purpose of holding the exhibitions of the society.

Oneida County, N. Y.—Henry Rhoades, President; Plyment Mattoon, Rob't Waterman, Vice-Presidents; L. T. Marshall, of Vernon, Secretary; A. G. Gridley, Treasurer. Premiums were awarded at the annual meeting of this society for the following crops; 48 bushels winter wheat, 30 do springwheat, 83 bushels oats, 54 bushels barley, 114 bushels Indian corn, (four other crops of corn from 89 to 98 bushels,) 54 bushels buckwheat, 1324 bushels carrots, each grown on 1 acre.

Cortland County, N. Y.—Peter Walrod, President; Charles Taylor, Alfred Chamberlain, Moses Kinney, Chauncy Morgan, Vice-Presidents; Geo. J. J. Barber, Secretary; Amos Hobart, Cor. Secretary; Ira Bowen, Treasurer. This society paid premiums for the following crops; 87 bushels Indian corn, 82¼ bush. oats, 720 bush. ruta-baga, each raised on one acre; also for 136½ bushels carrots, raised on an an eigth of an acre, being 1092 bushels per acre, also a second premium for carrots, for a crop at the rate of 900 bushels.

Rensselaer County, N. Y.—E. N. Pratt, President; Wm. Buswell, George Vail, Abram Van Tuyl, Alex. Walsh, Isaac Tallmadge, Daniel Fish, Joseph Haswell, Joshua S. Lewis, B. B. Kirtland, Z. P. Burdick, George T. Dennison, George W. Glass, James Turner, John Mesick, James T. Davis, Richard J. Knowlson, Dennis Belding, Vice-Presidents; John J. Viele, Recording Secretary; John Fitch, Corresponding Secretary; Frs. N. Mann, Treasurer.

Norfolk County, Mass.—An agricultural society has recently been organized in this county. The officers are—Marshal P. Wilder, President; Chas. Francis Adams, Samuel D. Bradford, Ebenezer Burgess, Benjamin V. French, Cheever Newhall, Josiah L. Richardson, Vice-Presidents; Edward L. Keyes, o. Dedham, Recording Secretary; Edgar K. Whittaker, of Needham, Corresponding Secretary; Enos Ford, Treasurer. A committee was chosen to collect funds for the society. The following donations were obtained, viz: From Chas. F. Adams, $300; Marshall P. Wilder, $100; B. V. French, $100; Aaron D. Williams, $100, and $270 from subscription members, at $5 each. Different towns were pledged to raise the following sums: Roxbury, $500; Dorchester, $400, Needham, $100; Quincy, $100; Dedham, $300; Dover, $50; Wrentham, $200; Milton, $100.

Notes for the Month.

Communications have been received, since our last, from E. C. Frost, W. C. W., Wm. Freeland, F. Holbrook, J. S. Pettibone, John Tufts, Rob't. M. Marshall, Wm. Little, P. S., Yeoman, Agricola, Practical Farmer, D. G. Williams, J. L. Childs, A Book Farmer, Timothy Beaman, Prof. E. Emmons, A. G. Moody, Wm. Bailey, Subscriber, Prof. Robert Peter, J. McKinstry, H. C. W., Dennis Johnson, Dean, James Eaton, R. G., Isaac Hildreth, F. Holbrook, A. Wanzer, A Farmer's Daughter, Chas. Betts, S. H. Reed, Chas. E. Norton, S. T. Duffell, N. P. A., B. A. Hall, J. B. Dill, Pennepack, W. C. B., J. J. Craig, W. A. Tryon, P. S. Bunting, S. Gillespie, A. C. Richards, W. R. W., G. A. Hanchett, P. Wing, O. P. H.

Books, Pamphlets, &c., have been received, since our last, as follows:—Geographical Memoir upon upper California, with a map of Oregon and California, by J. C. Fremont, from Hon. J. W. Bradbury, U. S. Senate.—Report of the Ohio Pomological Convention for 1848. Elements of Agriculture, for the use of Schools, translated from the French, by F. G. Skinner, and Sheep Husbandry in the South, by H. S. Randall, from J. S. Skinner, Esq.—Judge Beatty's Essays on the Agriculture of Kentucky, from Lewis Sanders, Esq.—Proceedings of the Penn. Hort. Society, and list of premiums for 1849, from Thomas Hancock, Esq.—Catalogue of Western Reserve College for 1848-9.—Transactions Essex (Mass.) Ag. Society for 1848, from J. W. Proctor, Esq.—Report of the Boston Water Commissioners, on the material best adapted for water pipes, from Prof. Horsford.—The Safety Mask, or Prophylactic Protector from diseases produced by contagion, infection, or malaria, by John Lewis, of Kentucky, the inventor, from the author.—Catalogue of the Mount Airy Ag. Institute, from the Principal, John Wilkinson, Esq.—Flower seeds, from T. Reid, Little Fort, Ill.

☞ We tender our grateful acknowledgments to our numerous correspondents, for the liberal contributions with which we have been favored the present winter. Some of them, of course, must be delayed; but we beg our friends, whose favors are laid over for a month or two, not to consider that it is done because we consider their favors less valuable than those published. We endeavor to make a fair selection for each month, so that one number shall about equal the others. Among the papers filed for our next No., are those of Prof. Peter and Dr. Martin, of Kentucky—Mr. J. S. Pettibone, Mr. J. M'Kinstry, H. C. W., Pennepack, and many shorter ones, for "The Farmer's Note Book," and other departments of the paper.

Premiums.—Ih our next, we shall publish a list of the persons, to whom our premiums for subscribers, received previous to the 20th of March, are awarded.

Nursery Catalogues.—It would give us pleasure to comply with the requests of our friends for these Catalogues, were it in our power; but we have not had a copy from any nursery for a long time.

Hereford Beef.—We lately saw five head of fine Hereford cattle, owned and fattened by Mr. Edward Wells, of Johnstown, N. Y. There were four steers, coming four years old, and one cow. They were all from the former herd of Messrs. Corning and Sotham. The steers were reared in the ordinary way, on hay and grass, and have only been stall-fed about three months. They are large and well-shaped, and have fattened remarkably well for the time they have been feeding. The cow has been an excellent breeder, but has become somewhat in years, and having failed to have a calf last season, it was thought best to fatten her. The fine condition of these animals supported the high character which the Herefords maintain in England, for beef. Mr. Wells has several choice breeding animals of this breed.

"North American Pomological Convention."—A circular has been issued by "the Committee of the North American Pomological Convention," which has been supposed, by many persons who have received it, to have emanated from the New-York State Agricultural Society, as we learn from several letters from gentlemen to whom it was addressed; and we see by the Cleveland Herald, that Professor Kirtland, in declining the appointment conferred upon him by that circular, alludes to the appointment as having been made by "the N. Y. State Ag. Society." Under these circumstances, it is proper that we should say that the New-York State Ag. Society had nothing to do with the circular in question, nor with the appointment of the committees named therein; nor do we suppose it to be the intention of the State Ag. Society to extend its operations beyond the limits of the State.

Albany Agricultural Warehouse.—By the advertisement of H. L. Emery, it will be seen that he has re-established himself at the spacious new building lately erected on the site of the Townsend House, 369 Broadway. He has here collected a large assortment of implements, all of which are entirely new, and of the most approved construction. He is therefore prepared to supply every article in his line of trade, at the shortest notice. Farmers visiting the city, will find the establishment worthy their attention.

Chemical Manure.—Attention is invited to the advertisement of the "George Bommer Manure Company," in this paper, who contemplate, it will be seen, furnishing farmers and gardeners with a superior article of concentrated manure. It is a subject with which Mr. B. has been long familiar, and if he shall succeed in furnishing an article of good and uniform quality, there must be a large demand for it.

Sale of Ayrshire Cattle.—We invite attention to Mr. Bement's advertisement in this number, of his Ayrshire stock. Several of the animals offered have taken premiums at the shows of the N. Y. State Ag. Society. The Ayrshires are a good breed for the dairy, and better adapted to light soils than the Short-horns.

Lawrence Scientific School.—This school, which is attached to Harvard College, Cambridge, Mass., continues in successful operation. The second term for the year 1848-'49, commences on the first of March, and will end on the 14th of July. Prof. Horsford will lecture upon Theoretical and Experimental Chemistry twice a week, from the second of April to the close of the term. Excursions will be made in term time to manufacturing establishments in the neighborhood, where the practical application of chemistry to the arts may be observed. Prof. Horsford will continue to receive special students to the course of experimental instruction in Chemistry, who will give their attendance in the laboratory from 9 o'clock A. M. to 5 o'clock P. M. The course will be modified to meet the wants of those designing to pursue practical analysis, manufacturing, metallurgy, medicine, engineering, agriculture, or instruction, and proportioned in duration to the objects and previous acquisitions of the student.

Prof. Agassiz will lecture on Zoology; Prof. Wyman on Com. Anatomy and Physiology; Prof. Gray on Botany and Vegetable Physiology; Prof. Webster on Mineralogy and Geology. For particulars inquire of Prof. E. N. Horsford, Cambridge, Mass.

Death of a Friend of Agriculture.—The Maine papers mention the demise of Payne Wingate, Esq., of Hallowell, Me. He was a close student of nature, in all the forms to which she was accessible to his observation, and was remarkable for the extensive fund of knowledge he had collected, under comparatively limited opportunities. He was ardently devoted to the interests of agriculture and horticulture, in which he rendered the community important benefits,—though laboring for years under infirm health. A letter lately received from **James L. Child**, Esq., of Augusta, thus notices his death: "Our old friend Payne Wingate, *is in his grave*—quite a loss, I assure you, to several of us, who often visited him, to talk over matters and things in general, touching the interests of agriculture, &c."

☞ We hear with much regret, of the death of Mr. **Thomas Noble**, of Massilon, Ohio. Mr. N. was one of the best and most successful farmers with whom we have ever been acquainted. He was an Englishman, but had resided on the farm where he died for several years, and had been of great advantage to the section by the excellent examples he gave in the various departments of husbandry. His name will be recollected as an occasional correspondent of the Cultivator.

☞ About a page of "Monthly Notices," are necessarily deferred till next month.

Prices of Agricultural Products.

New-York, February 15, 1849.

FLOUR—Genesee, per bbl., $5.87½a$6—Fancy brands, $6.25a $6.75.

GRAIN—Wheat, per bush., $1.15a$1.30—Corn, Northern, 64a 65c.—Southern, 55a60c.—Rye, 66c.—Oats, 34a36c.

BUTTER—best, per lb., 20a22c.—western dairy, 15a18c.

CHEESE—per lb., 6¼a7c.

BEEF—Mess, per bbl., $11a11.25—Prime, $7.50a$8.

PORK—Mess, per bbl., $11a$11.25—Prime, $10.25.

LARD—per lb., 6¾a6⅞c.

HAMS—Smoked, per lb., 7c.

HEMP—American dew-rotted, per ton, $155a160

TOBACCO—per lb., Kentucky, 2½a7.

COTTON—Upland and Florida, per lb., 6¾a7⅞—New Orleans and Alabama. 7⅛a8¾c.

WOOL—(Boston prices) Prime or Saxon fleeces, per lb., 35a 40

American full blood Merino,.................. 31a33c
" half blood do.,... .... 26a29c
" one-fourth blood and common,...... 24a26c

Remarks.—Flour is firm, with a steady demand at the prices given. Beef, pork, and lard are rather dull, and prices have lowered within a few days.

Fruit Scions.

THE subscriber will be prepared to furnish scions for this season's grafting of the celebrated fruits of Western New York.

"Northern Spy,"
"Norton's Melon,"
"Early Joe,"
"Jonathan,"
"Swaar,"
} Apples.

All orders, post paid, shall have immediate despatch. Price per hundred $1. Can be sent by mail or express.

JAMES H. WATTS.

Rochester, N. Y., March 1, 1849,—1t.*

Isabella Grapes,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over 12 years, has conferred on the vineyards at Croton Point, are offered to the public. Those who may purchase, will receive such instruction as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D., 310 Broadway, New York, will recieve attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the northern, and all the western, middle and southern states.

March 1.—1t.*

Mt. Hope Garden and Nurseries,

Rochester, N. Y.

THE Proprietors of this establishment solicit the attention of amateurs, Horticulturists, Nurserymen, and dealers in Trees, to their present large stock of well grown, thrifty and healthy fruit trees—comprising the very best varieties of

PEARS, APPLES, CHERRIES, PEACHES, PLUMS,
And all other fruits. Their stock of

Dwarf Pears, Apples and Cherries,
For Garden Culture, is the largest in the Union. The Stock of

ORNAMENTAL TREES
Is also very large, and can be furnished at low prices.

Our stock of NORTHERN SPY Apple trees is the best in this country, and we now offer them at reduced prices. Trees 5 to 9 feet high, $25 per 100; 2 to 4 feet, $12 per 100, and less per 1,000.

ROSES, including the very best varieties. Our stock of *Hybrid Perpetuals* is particularly large. *Red Moss*, fine plants on their own roots, $18 per 100. Of PHLOXES we have a splendid collection, including all the newest and best kinds.

HEDGE PLANTS, such as Privet, Buckthorns, Osage Orange, Norway Spruce, Hemlock, American Arborvitæ, Red Cedar, &c.

STOCKS FOR NURSERYMEN.

70,000 Pear Stocks, one and two years old.
80,000 Quince do., fit for budding next summer.
20,000 Paradise do. do do
15,000 Prunus Mahaleb, do do
100,000 Plum do do
1,000 English Gooseberries.

One of the proprietors is now on his return from Europe, with an immense stock of trees, plants, &c. We will enumerate only a few of them, viz:

30,000 Norway Spruce, 1 to 2 ft.; 12,000 Scotch Firs, 1 to 2 ft.; 10,000 European Larch, 1 to 2 ft.; 3,000 Austrian Pines, 1 to 2 ft.; 2,000 Pineaster Pine, 1 ft.; 3,000 European Silver Firs, 12 to 15 in.; 1,000 Siberian arborvitæ; 1,000 Tree Box, 5 different varieties; together with a great variety of Rhododendrons, Auracarias, Deodar Cedars, Cedar of Lebanon, Belgian Azalias, *Spiræa prunifolia, flore pleno*, Berberries, Tree Pæonias, &c., &c.

Priced lists of the above, together with a great variety of new Evergreens, Shrubs, Roses, &c., will be forwarded to all *post paid* applications.

All orders promptly attended to in the best manner. Catalogues forwarded to all *post paid* applicants.

March 1, 1849.—1t. ELLWANGER & BARRY.

Country Seat and Fruit Farm for Sale.

THE subscriber, compelled by ill health to relinquish the cares of business, offers for sale the "Belmont Farm," on the banks of the Passaic, oppposite Belleville, New-Jersey, eight miles from New-York, and three and a half from Newark. The farm contains 72 acres—9 in woodland and the remainder under cultivation, with a front of 1,200 feet on the river—and springs of good water crop out on the upper part of it, forming a small stream, which runs through it at all seasons. It has upon it a comfortable stone house, new milk house, new bath house, a good barn, corn house, &c.; a number of young thorn and evergreen hedges; a new wharf, where vessels can discharge cargo (manures, &c..) at all stages of tide; and a fine fishery, where from 2,000 to 3,000 shad are caught annually. The grounds afford several superior building sites, combining beauty, extent and variety of prospect, with ease of access, contiguity to shade and woodland, and a finely diversified local landscape, should the purchaser be desirous of building a cottage or villa to suit his own taste.

Fruit.—Besides some hundreds of apple, pear, quince, cherry, and peach trees, in full bearing, there are about four thousand young fruit trees propagated by the proprietor, from the choicest varieties, obtained from the most reliable sources, (chiefly from the Highland nurseries of Messrs. A. J. Downing & Co.) 2,000 of them have been set out with great care in "borders" well prepared; among which are—1,250 peach trees, (1,000 of them come into full bearing this year) Kinds:—George IV., Snow, Early Tillotson, Druid Hill, Early York, Crawford's Late, Late Red Rareripe, Late Heath Cling, Large White Cling, Malta, Brevoort's Morris, &c. 500 apple trees—Newtown pippin, Rhode Island Greening, Esopus Spitzenberg, Baldwin, Yellow Belle Fleur, Strawberry, Lady, Fall Pippin, Bush, Gloria Mundi, Alexander, Dutch Mignonne, Gravenstein, Swaar, Northern Spy, &c.—(50 varieties.) 900 pear trees, mostly Columbia, Beurre d'Aremberg, Passe Colmar, Winter Nellis, Glout Morceau, Bartlett, Dearborn's Seedling, Early Bloodgood, &c.—(100 rare varieties, one tree of a kind.) 1,000 Dwarf Pear Trees on Quince stocks—mostly Duchesse d'Angouleme, Beurre d'Aremberg, Dix, Bartlett, Urbaniste, Bonne Louise de Jersey, Beurre Bosc, Van Mons' Leon Le Clerc, Columbia, Bezi de la Motte, Flemish Beauty, Knight's Monarch, &c.—(part in bearing.) 100 Isabella Grape Vines. 200 Cherry, Plum, and Quince trees and a selection of miscellaneeus large and small fruits, ornamental trees, &c. Also, 4,000 pear stocks; 1,000 mountain ash stocks for pears.

As a fruit farm this place offers great advantages to any one wishing to cultivate fruit for the New-York market In beauty and variety of scenery, in healthfulness of climate, in the intelligence and morality of its population, in short, in all those considerations which combine to render the region attractive and desirable as a family residence, it is believed that the vicinity of Belleville possesses advantages not surpassed by any other place in the neighborhood of New-York. One half the purchase money can remain on mortgage, if desired. For further particulars apply on the premises, or by mail to L. S. HASKELL, Belleville, N. J., or to HASKELL & MERRICK, 10 Gold-st., New-York.

March 1—1t.

To Nurserymen, Gardeners, and Horticulturists generally.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes, by a strict attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References—A. J. Downing, Esq., and A. Saul & Co., Newburgh; H. Reid, Murray Hill, N. Y., and Elizabethtown, N. J.

GEO. G. SHEPPARD,
143 Maiden Lane, New-York.

N. B. Orders for Russia Mats, for Budding or Packing, immediately supplied. New-York, March 1, 1849.—2t.

Fruit Trees.

THE subscriber would announce to the public that he has for sale at his nursery, a general assortment of Fruit Trees, embracing nearly all of the choicest kinds, all of which have been obtained from the most reliable sources, or from bearing trees of well known varieties, and propagated with his own hands in the most careful manner; and a large quantity have been proved on his own grounds. His stock of apples especially, is unusually large and fine, and will be sold at reasonable prices, with a liberal discount to nurserymen and venders of trees. Persons at a great distance, wanting small trees, will be supplied at a corresponding price.

Scions for grafting or budding, of all the most rare and scarce varieties, at $1 per 200, with a discount where 50 or 100 varieties are ordered. And large quantities of the more plentiful kinds, at reduced prices, in proportion to quantity.

Red Antwerp Raspberries by the 1,000, cheap.

Catalogues gratis to all post paid applicants.

Canterbury, Orange Co., N. Y.,—2t. C. HAMILTON.

Advertisement.

READING ROAD NURSERY, near Cincinnati. For Sale the entire stock of Trees, Shrubbery, Evergreens, Hardy and Greenhouse Plants, together with all the tools, implements, Buildings, Lease, &c., offering one of the best openings in the West, to any person desirous of engaging in the above business, being now in successful operation, with every facility for carrying on an extensive business.

The land contains nearly 10 acres of ground, handsomely situated, fronting on the Springfield and Cincinnati turnpike, 1½ miles from Cincinnati.

If not previously disposed of by private contract, the whole will be offered at Public auction, the stock of Hardy Fruit and Ornamental Trees, Evergreens, Shrubs, &c., on the 2nd of April; the Greenhouse Plants, Buildings, Tools, Implements, Lease, &c., &c., on the first of May.

Further description is deemed unnecessary, it being presumed that persons wishing to purchase will call and examine for themselves. Letters of inquiry, to receive attention, must be post paid. Address, W. HEAVER, Reading Road Nursery, Cincinnati, O.

March 1, 1849—2t.

TREES! TREES!

COMMERCIAL GARDEN AND NURSERY

Of Parsons & Co., Flushing, near N. Y.

THE Proprietors of this Establishment, invite public attention to their large assortment of every desirable variety of

FRUIT AND ORNAMENTAL TREE OR SHRUB.

Their importations of everything new in Europe are annually continued, and they offer a very large variety of

ORNAMENTAL TREES AND SHRUBS,

imported expressly for arboretums and pleasure grounds. Their collection of *Roses* is annually enriched by novelties from abroad, many of which may be found described in their new work on the Rose, recently published.

FRUIT TREES

Receive their particular attention, and are propagated under their personal supervision; this care, with their possession of extensive specimen grounds, in which is tested every variety of fruit they cultivate, enables them confidently to guarantee the genuineness of the varieties.

Their care in pruning and cultivation enables them also to send out thrifty and well formed trees. From their large scale of propagation, they can offer to dealers very liberal discounts, where hundreds or thousands are taken. Orders or inquiries can be addressed to the proprietors, at Flushing, near New-York, where Catalogues will also be furnished.

They have formed a branch at Brighton, near Boston, and by the entire success of their trees transplanted thither, have thoroughly proved the superior adaptation of Long Island trees to the soil and climate of any part of New England.

At the season of transplanting, a salesman will be at this branch to furnish those who may prefer obtaining their supply thence.

March 1.—2t.

Thorp, Smith & Hanchett,

(*Late Thorp & Smith*,)

Proprietors of the SYRACUSE NURSERIES,

HAVE now ready for sale a very extensive stock of the most valuable kinds of FRUIT TREES, embracing most of the standard varieties, (including those most highly approved and recommended by the late Pomological conventions at New-York and Buffalo,) which, in *vigor, thriftiness and symmetry* of growth are not excelled by the productions of any other nursery in the State. Having more than *forty acres* now chiefly devoted to the cultivation of FRUIT TREES, they are prepared to sell at WHOLESALE, *as largely*, at prices *as low*, and on terms *as reasonable*, as any other nursery establishment here or elsewhere. The superior quality of their trees must contine to recommend them to amateurs, who desire to unite ornament with utility; and to orchardists, whose chief aim is to obtain such only as are healthy and vigorous.

They have also, a large assortment of finely *formed* ORNAMENTAL TREES, and several thousand *Seedling Horse Chestnuts*, at very moderate prices.

Orders will be promptly attended to, and trees packed safely for transportation to any distance.

☞ Catalogues furnished *gratis*, to all *post-paid* applications. They may also be obtained, and orders left at the store of M. W. Hanchett, between the Railroad and Syracuse House.

Syracuse, March 1, 1849—3t.

Wm. Reid offers for sale this Spring,

At his Nurseries, Murray Hill, 37th Street, and 4th Avenue, New-York, and Elizabethtown, N. J.

A General assortment of Fruit and Ornamental Trees, Shrubs, &c. Also, a good stock of Roses, Isabella and Catawba vines, several thousand yards of Box, two years grown, bushy, and in fine order for laying edgings. The stock of Fruit also at the Elizabethtown Nursery, is very extensive, and probably contains as large a stock of Pears, Apples, &c., as can be found at any other Nursery establishment in the United States. All the fruit trees, &c., are grown and strictly attended to by the proprietor in person, which prevents in a great measure, any mistake or doubt that always attends imported trees; and all of the fruit trees, intended for orchard planting; are always invariably worked on good seedling stocks. Also, most of the new varieties of fruits, can always be had as soon as introduced, at the usual catalogue price, but of a less size when of late introduction.

The following varieties of fruit have been worked extensively, and can be supplied in quantities for orchard planting or the trade. Pears are generally two to three years old, and the apples three years, and of a good fair size.

Price of Pears per hundred $35, and of apples $20.

PEARS—Bartlett, Beurre Diel, Duchess d'Angouleme, Louise Bonne de Jersey, White Doyenne, Easter Beurre, Van Mons' Leon Le Clerc, Belle Lucrative, Dearborn's seedling, Heathcot, Madeleine, Columbian Virgalieus, &c. Also, about 50 varieties worked on Quince stocks, of a fine thrifty growth, suitable for dwarf trees.

APPLES—Baldwin, Esopus Spitzenberg, Rhode Island Greening, Fall Pippin, Roxbury Russett, Swaar, Yellow Harvest, Gravenstein, Yellow Bellflower, &c.

The following Ornamental Trees can also be furnished by the Hundred, at very moderate prices, of suitable sizes for ornamental grounds, cemeteries, &c.

Weeping Willows, Deciduous Cypress, Norway Maple, Eng'sh plain Silver Maple, Mountain Ash, European Larch, Sugar Maple, Catalpa, Ailanthus, Linden, European Ash, Norway Spruce, Balm of Gilead, Fir, Arbor Vitæ, &c.

MAGNOLIAS, viz.—M. macrophylla, triptela, glauca, acuminata, ariculata, conspicua, soulangeana, purpurea, &c. Most of these can be furnished by the dozen or hundred.

The following Shrubs, Vines, &c., can also be furnished by the dozen or hundred:

Honeysuckles of sorts, Chinese and American Glycines, Bignonia grandiflora, and radicans, Clematises, Ivys, Snowballs, Lilace, Syringa, Laburnum, Pyrus japonica, Venetian Sumac, Spirea, Deutzias, &c.

Hawthorn, Honey Locust, Privet, Buckthorn, Osage Orange, Arbor Vitæ, &c., for hedging.

Orders by mail, directed to WM. REID, Murray Hill Nursery, New York, or left at the Nursery, where all orders are executed, will be punctually attended to, and put in shipping order to send any distance.

Catalogues will be sent to all applicants.

Murray Hill, March 1, 1849.—1t.

A Virginia Farm

FOR SALE, within sixteen miles of Richmond, Va., containing 253 acres of superior land, well adapted to the culture of wheat, corn, oats and potatoes. The James River and Kanawha canal runs through the premises. The situation is truly splendid, viewing the surrounding country many miles. There is a very fine orchard of apple, pear cherry and peach trees--many fine springs of superior water. The house has just been put in good repair. The outhouses are nearly all new, built in the best manner, and can accommodate 30 head of horses and cows. There are two churches, a post office, tavern and physician quite near. Also, a market for all kinds of fowls, meats and vegetables, within one-quarter of a mile from the farm. A saw and grist mill also in sight. One of the owners is going to California.

All information will be given, by applying, post paid, to

B. B. ALLEN, No. 19 Platt st., New-York.

March 1, 1849.—3t.

Wm. R. Prince & Co.,

SOLE PROPRIETORS OF THE

LINNÆAN BOTANIC GARDENS AND NUSERIES,

At Flushing,

ANNOUNCE to their correspondents, and to nurserymen in particular, that, in addition to their vast stock of trees, occupying 70 acres, they have just imported 200,000 trees from Europe. They desire to forthwith receive the wholesale orders of nurseries and others, to which immediate replies will be made, stating the lowest rates, so that all engagements may be perfected now, and forwarded as soon as the spring commences. A credit will be given, or an extra discount made for cash, in whole or in part.

The following, we have a very large stock of:

Pears, on the pear and quince stock, of all sizes, 1 to 5 years from the graft, of which 12,000 are in a bearing state.

Apples, Cherries, Plums, Peaches, Apricots, Nectarines and Quinces, of all the choicest varieties.

Grapes—all the foreign table varieties, and all the good American varieties, including many thousands of Black Hamburgh, Golden Chasselas, White Sweetwater, Bar sur Aube, Isabella, Catawba and Clinton.

Raspberries—Fastolff, Red and White Antwerp, Franconia, Large Fruited, Monthly, &c.

Gooseberries—all the choicest Lancashire varieties.

Currants—Red and White Provence, Dutch, Victoria, Cherry, &c.

Strawberries—a collection surpassing all others, in Europe or America.

Rhubarb—Leviathan, Victoria, Tobolsk, Dalley's Giant, and other fine varieties.

Paradise Apple Stocks and Pear Stocks, two years old.

300,000 Ornamental Trees, and Shrubbery of all kinds and sizes

100,000 Norway Spruce, Balsam Fir, Silver Pine, White Spruce, American and Chinese Arbor Vitæ, and other evergreens of all sizes.

2,000 Rhododendrons, 2 to 4 feet, of the finest varieties.

60,000 Roses, of all the finest Perpetual, Daily, Tea, Moss, and other classes, at very low rates.

Hedges—Osage Orange, Buckthorn, Hawthorn, Evergreen, Privet and others.

Bulbous Flower Roots—the finest of every class.

Dahlias—200 very select and superb varieties.

Camellias—400 varieties of blooming size, at low rates.

Chinese Azaleas—70 splendid varieties, very cheap.

Pæonies, Carnations, Chrysanthemums, Phloxes, Iris, and other beautiful herbaceous plants, very cheap.

Scions for Grafting, and Cuttings of Ornamental Trees and Shrubs.

The *only* extensive collection of bearing specimen trees, in this town, belongs to this establishment, and insures the superior accuracy of the trees grafted therefrom. Every rose and strawberry premium were awarded by the L. I. Horticultural Society, to this establishment the past season. Flushing, March 1, 1849.—1t.

(*Extract from the Genesee Farmer.*)

Profits of Fruit—Northern Spy Apple.

BY RICHARD J. HAND

Mr. Barry—Below I give you a statement of the products of one acre of land, on which I have grown the Northern Spy and Roxbury Russet Apples, during the year 1848.

110	barrels Northern Spy sold	at $2.50,	$275 00
10	do do	3 50,	35 00
30	do 2d quality,	at 1.00,	30 00
100	do Roxbury Russet, do	1.00,	100 00
			$440 00

I sold the Spys mostly, to J. H. Watts, at Rochester. If any of the Monroe county farmers have a better story to tell, let's have it. They were grown on twenty-three trees.

Mendon, N. Y., December, 1848.

50,000 APPLE TREES, of the celebrated Northern Spy, (being the finest late spring apple grown in North America,) for sale at the Old Rochester Nursery, at Rochester, New-York, by S. Moulson.

1,400	trees,	7 feet high,	at 50 cents each.
6,500	do	5 to 6 feet high,	at 37½ cents each
10,000	do	3 to 4 feet high,	at 31 cents each
33,000	do	2 feet high,	at 25 cents each.

The above are all root-grafted. The small trees are fine for shipment to Europe. Orders for the 2-ft. or 3 to 4-ft. trees will be delivered in N. Y. or Boston *free* of charge for transportation when ordered in quantities of $25 or over. Sterling exchange received for foreign orders, at $4.90 to the £. European orders properly packed for the voyage, for which a moderate additional charge will be made.

The Scions from which the above trees were grown, were obtained chiefly from Mr. Hand's trees, and are guarantied to be genuine.

Also, a general assortment of

Apple, Pear, Peach, Cherry, Plum, Apricot, Nectarine, and other fruits; together with the usual assortment of Ornamental Trees and Shrubs. And one thousand plants of

GIANT RHUBARB.

A variety that outsells any other offered in this market, and has invariably taken the first premium of the Horticultural Society of the Valley of the Genesee.

S. MOULSON,
86 Front St., Rochester, N. Y.

March 1, 1849.—1t.

To Farmers.

THE LODI MANUFACTURING CO., have now on hand and ready for sale, a large quantity of their *NEW AND IMPROVED POUDRETTE* freshly manufactured.

They *guarantee* that every barrel or bushel they sell contains 66 *per cent of night soil*, and point to a reputation of ten years standing, as well as to the heavy outlay of capital in their business, as in some sort a surety against imposition.

Considering *night soil* as the *strongest ingredient* in their Poudrette, their mode of manufacturing is simply to disinfect and add sufficient vegetable fibre to absorb moisture.

Two barrels ($3 worth) will manure an acre of corn in the hill, planting four feet apart each way. One application is sufficient on good ordinary ground. On *poor* ground a second application is sometimes necessary to ensure a good crop. This manure has advantages in its use over guano or other manures, being the cheapest and quickest in operation. Corn manured with it will grow more vigorously, and mature earlier—while the yield is heavier in proportion.

Four bushels struck measure, are packed in a barrel. It will be sold at the following prices, *delivered in New-York* free of cartage or other expense: 1 bbl. $2—3bbls $5, 9 bbls. $10.50, and at the rate of $1.50 per bbl. for any larger quantity. At the Factory, 25 cents per bushel will be charged. A trial is respectfully asked.

All orders containing a remittance, with directions to ship, will be immediately attended to.

Apply, if by letter, post paid, to The Lodi Manufacturing Co., 51 Liberty st., New-York.

March 1.—2t.

Ayrshire Cattle For Sale.

THE subscriber having disposed of his farm, will sell at public auction at Three Hills Farm, on the Cherry Valley Road, 3½ miles west of Albany, on the 14th of March next, his choice herd of Ayrshire Cattle, consisting of the imported cow "Allice," her daughter, "Fairy," for which the first premium was awarded at the fair of the New-York State Agricultural Society, held at Saratoga Springs, in 1847. "Lassie," three years, "Moggie," two years, "Norma," one year, and "Jenny Dean," 9 months old. Two year old bull and bull calf. Also, several head of cows and heifers, a cross of Ayrshire and Durhams.

These cattle, except "Allice" and "Fairy," were bred by the subscriber, are principally young, and rich milkers. Also, 2 young boars, and several breeding sows of the Medley breed.

Catalogues, with pedigrees, &c., will be furnished at the sale.

C. N. BEMENT.

Albany, Feb. 1, 1849.—2t.

Selling Off.

LINNÆAN BOTANIC GARDEN AND NURSERY, late of Wm. Prince, deceased. *Flushing, L. I., near New-York.* Winter & Co., Proprietors.

In consequence of the decease of the Junior and of the advanced age of the surviving partner, the entire stock of this establishment, comprising every description, including the newest and choicest varieties, of

FRUIT AND ORNAMENTAL TREES,

Shrubs, Vines, Plants, Roses, &c., will be disposed of at *very reduced prices*, in order to close the business as speedily as possible.

Orders accompanied with the *cash*, to the amount of TEN DOLLARS, or upwards, will be supplied at a reduction of 25 *per cent* from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by *wholesale*, will be supplied at such reduced prices, according to kind and quantity, as will probably prove satisfactory to them.

DESCRIPTIVE CATALOGUES *gratis*, on application, *post* paid. Feb. 1.—2t.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers. Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud, and well branched, including the very best sorts. Red Antwerp, Fastolff. Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c. Dahlias, including the new fancy sorts.

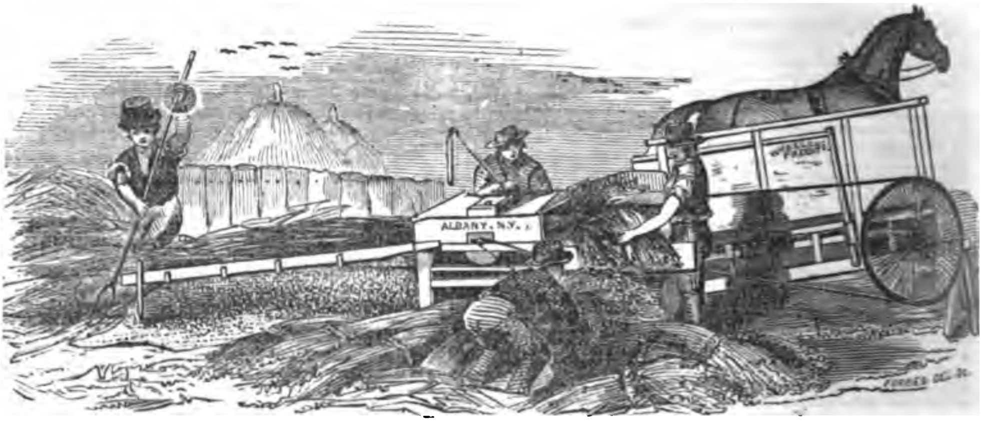
Descriptive priced lists sent to post paid applicants.

Feb. 1—4t. B. M. WATSON.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

WHEELER'S PATENT IMPROVED PORTABLE



Railroad Horse Powers and Overshot Threshers and Separators.

HAVING sold about two hundred and fifty sets of these Powers and Threshers during the past eighteen months, many of which were purchased by some of the large Wheat Growers in this State, Vermont, Michigan, Illinois, Wisconsin and Canada, and without exception having given entire satisfaction, (which was guarantied in all cases,) I do not hesitate to recommend them to Farmers and Mechanics desiring such machines, as being in my opinion the most convenient, if not superior in all respects, to any others now in use. Very many flattering testimonials have been received, several of them estimating the cost of threshing at less than one half that with the ordinary sweep Powers, with from four to six horses These machines have been extensively used in the eastern part of the state of New York, and generally through New Jersey and eastern Pennsylvania, nearly six years, and with a constantly increasing demand. The first machines put in use, and which have been in constant use, are nearly good as new; the only expense attending their use is the oil for the wearing parts, thereby establishing the fact that they are not only cheap, and within the reach and control of every ordinary farmer, but durable and cheaply kept in order. Some of the principal advantages of these machines are the following:

The power itself occupies but very little space, and is operated wholly, if desired, by the weight of the horse, the Power being placed at an angle of ten or fifteen degrees only, according to the weight of the horse, which is found sufficient for threshing all grains sawing wood, &c. It is comparatively light and portable, and can readily be handled by two men, and used on any common threshing floor, thereby securing ease and safety both to man and beast during stormy weather. The moving parts are very simple, as sufficient speed for all purposes is obtained with but one shaft, without gearing; thus avoiding a great amount of friction, which is unavoidable in most other machines in use. The Thresher is new in many respects, and has several important advantages over most others. By having an overshot cylinder, it admits of a level feeding table, and the person feeding it stands erect, also has the control of the horse, and by means of a brake, the power can easily be checked or stopped by him with perfect safety, thereby often avoiding accidents. By this overshot motion, all hard substances are prevented from getting in, avoiding the danger of spikes being broken and thrown out—not an instance being known of such accident By this machine, the grain is not scattered, but thrown upon the floor within three feet of it, and admits a Separator to be attached sufficiently high from the floor for all the grain to fall through it, while the straw is carried quite over in good condition for binding, the straw not being cut or grain broken. The cylinder is considerably less in diameter than most machines in use, and has only about one-third as many spikes, but double the number in the concave, which admits of greater speed with the same power. It is also, several inches longer, which gives ample room for feeding it to much better advantage. The Separator has been sold with each Thresher, and is considered indispensible, as it makes a perfect separation of the straw and grain, leaving the latter in the best possible condition for the fanning mill. Three men with a single power, can thresh 75 to 100 bushels of wheat or rye, or four men with a double Power, 175 to 225 bushels of wheat or rye, or double that quantity of oats or buckwheat, per day; and with fanning mill attached to the Power, and one man to attend it, the grain can be cleaned for market at the same time.

They can be taken apart and packed very compactly, and forwarded to any distance by canal, rail road or wagon. The Single Power, with Thresher, Separator, &c., weighs nearly 1100 pounds; the Douple Power, with the other apparatus complete weighs nearly 1700 pounds.

Price of the	Single Power,	$80
do	do. Thresher	25
do	Separator and Fixtures,	10
do	Bands for Driving, etc.,	5
do	Whole, in complete order for use,	$120

To these may be added a Fan Mill, with crank and pulleys, price $30, and a Saw Mill, complete in running order, price $35.

The price of the Double Power, Thresher, Separator, &c., complete, is $145, including rights of using, or $25 more than Single Power.

The above are sold singly or together as desired.

All Machines and Powers are warranted to perform according to the foregoing statements, and in case the purchaser is not satisfied, himself being the judge, they may be returned within three months at my expense, and the purchase money refunded.

TERMS.—Cash on delivery of the Machines All orders should be addressed Albany. and will be promptly attended to, and Machines delivered in care of railroad, canal or steam boat in Albany. Rochester, or Buffalo, the lowest rates for transportation from Albany only being added to the published prices. Remittances by mail at my risk. That the public may rely upon the foregoing statements they are referred to the following certificate.

"The subscriber hereby gives notice that he has disposed of his interest in the Albany Agricultural Warehouse to Mr. Horace L. Emery, who will hereafter continue the business in his own name (at his new stand No 369 Broadway, Albany.) All demands against the establishment will be paid by him; and all persons indebted to it, to settle their accounts with him without delay. Mr Emery has had the entire management of the Albany Agricultural Warehouse since it has been in my hands, and from an acquaintance I have formed with him, and from his long experience in the business, having been engaged in it some ten years, five of which was spent in the establishment of Messrs. Ruggles, Nourse & Mason, at Boston and Worcester, Mass, (the largest in America,) I feel an entire confidence in commending him to the public, as one in whose integrity and judgment, the patrons of the establishment may safely rely.

LUTHER TUCKER.

Editor, Publisher and Proprietor of The Albany Cultivator, and Proprietor and Publisher of the Horticulturist.

Feb. 1, 1848.

Also to the following persons, viz:

RUGGLES, NOURSE & MASON, Worcester and Boston.
S. W. Cole, of the New England Farmer, Boston.
WM BUCKMINSTER & SON, of the Mass. Plowman, Boston
PARKER & WHITE, Boston.
T. C PETERS & BROTHER, Buffalo.
RAPALJE & BRIGGS, Rochester.
D. D. T. MOORE, Ed. and Pub Gen. Farmer, Rochester, N. Y
J. M. EARLE, of the Mass Spy, Worcester.
J. A. WIGHT, Editor of the Prairie Farmer, Chicago.
A. B. ALLEN, Ed. of the American Agriculturist, N. Y.

We shall have an efficient agent at ROCHESTER, BUFFALO, CHICAGO and MILWAUKIE, and as far as possible keep a constant supply on hand at each point, for the purpose of facilitating the safe and speedy delivery and shipment of machines, and fulfilment of orders from a great distance, thereby avoiding the often long and perplexing delays occasioned by the irregularities of canal and lake navigation and inattention of disinterested forwarding and commission agents; and last, although not least, to avoid unreasonable charges. Shipping receipts and bills of lading always filled out and signed, and forwarded to the purchaser and consignees on the delivery of all machines.

Persons wishing either of the above machines can obtain further information by addressing me by mail—all communications promptly attended to, and orders solicited.

Albany Agricultural Warehouse & Seed Store,
No. 369 Broadway, Albany. N. Y
HORACE L. EMERY

☞ Price and descriptive catalogues, Gratis.

Red Antwerp Raspberries.

5,000 Plants of the true Large Red Antwerp Raspberry, for sale by the subscriber, at $6 per hundred or $50 per thousand. The Plants are large and strong, and warranted true.

S. A. BARRETT

Milton, Ulster Co., March 1, 1849.—1t.*

A Good Book Coming!

COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Vetinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK:

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

First—It is a mature work and a practical one, one which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and ultra scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for THE PEOPLE.

Secondly—It will have an unprecedented sale on account of its cheapness. It will make a volume of 288 closely printed pages. Illustrated with over one hundred beautifully executed engravings, by Brown, and will be sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It will contain full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

BOOK FOR EVERYBODY,

As well for the man who eats Fruit as for him who raises it.

This valuable work will be published early in February.

ONE HUNDRED AGENTS,

Active, intelligent and honest, are wanted to sell this book, in every State in the Union. A cash capital of from $25 to $50 will be necessary. Address, (*post paid*)

JOHN P. JEWETT & CO., 23 *Cornhill, BOSTON.*

☞ A rare chance for Agents to make money. Feb. 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

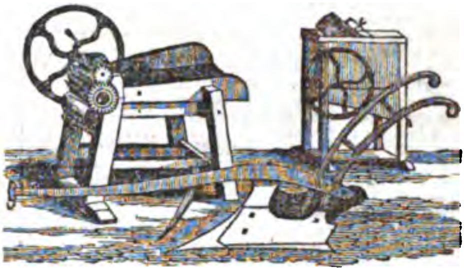
Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample. T. C. PETERS & BRO.

Buffalo, Dec 1—6t.



John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

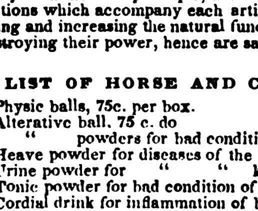
N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!



THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown to be of a dangerous tendency These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one.

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle.
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S Horse and Cattle Medicine Depot, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. Feb. 1.—3t.

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NOW IN THE PRESS,

TO BE PUBLISHED BEFORE THE CLOSE OF THE MONTH,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain more than

TWO HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole will form a handsome duodecimo volume, at the low price of One Dollar. March 1, 1849.

Portable Self-Acting Cheese Press.

Patented August, 1847, *by Chester Stone*.

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Albany Agricultural Warehouse,

Removed to 369 Broadway.

THE ALBANY AGRICULTURAL WAREHOUSE having been burnt in October last, and with it nearly the whole stock of Implements and Seeds, the subscriber has removed to the new and spacious store, No. 369 Broadway, where he is now prepared to supply all orders for Improved

AGRICULTURAL IMPLEMENTS, SEEDS, &C.,

Of which he has an entire new supply; and with increased facilities, and a better location for business, he solicits a continuance of the liberal patronage thus far extended to the establishment.

No. 369 Broadway, Albany. H. L. EMERY.

☞ Catalogues gratis on application by mail, &c.

Subsoil Plows,

OF the most approved patterns made in this country, constantly on hand.

Prices of small size for Gardens, with one extra share, . $7 00
Medium size for Two horse, and adapted for general farm use, full rigged with an extra share, ... 10 00
For large size, extra strong for heavy team to be used in draining lands and in nurseries, &c., &c., full rigged and one extra share, ... 13 50

Also, a complete assortment of all kinds of Agricultural Implements and Seeds, for sale at Manufacturer's prices, at the Albany Agricultural Warehouse, No. 369 Broadway, Albany, N. Y., by

March 1, 1849. H. L. EMERY

Market Gardener Wanted.

A Young or middle aged man of good moral character and who thoroughly understands the above business in all its branches, can have steady employment and good wages in a very pleasant part of the country, by applying to the subscriber personally or by letter (post paid.)

Good references given and required. H. W. CROSBY.

March 1.—1t. Easton, Pa

To Farmers and Planters.

FIVE Thousand Plows for sale at all prices, from $1.50 up; well made, of the most durable materials, on the latest improved principles, and adapted to every soil, crop, and manner of cultivation. A. B. ALLEN & Co., 189 & 191 Water St., N. Y.

Peruvian Guano.

ONE Thousand Tons of Peruvian Guano, just received from the Chinche Islands, for sale in lots to suit purchasers.

Also, THREE HUNDRED TONS Patagonian Guano.
Bone Dust, Poudrette, &c.

A. B. ALLEN & Co., 189 & 191 Water St., N. Y.

Feb. 1.—2t.

Gold Washing Machines.

LEAVENWORTH'S PATENT.—The superiority of these machines over all others is, that the Gold, Platina, Cinnabar (ore of Quicksilver) and black sand (containing a large per centage of gold) cannot escape; and that the gravel and dirt pass off without detention. These machines will perform more and better work than any other ever constructed. They may be operated by hand, horse, water or steam power. Price of hand machines, $25 to $35 each; horse power machines $50 each. Additional sieves, castings, irons and boxing extra.

In addition to the above, emigrants to California, will find at our Warehouse a large and complete assortment of the best and most recently constructed mining tools of all kinds; smelting and assaying apparatus, crucibles and retorts with printed directions for using. Pumps and Hose, Whitney's celebrated Rifles, Wagons, Carts and Wheelbarrows. Agricultural implements, Field and Garden Seeds, &c. &c., at the lowest prices.

The public are cautioned against purchasing Gold Machines, imitations and counterfeits of Mr. Leavenworth's patent, as he has directed his agent at San Francisco, E. Crosby, Esq., to enjoin all persons from using such on their arrival at California.

A. B. ALLEN & Co., 189 and 191 Water st., New York

Feb. 1.—2t.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

☞ All subscriptions to commence with the volume, (the Jan. No.,) and to be PAID IN ADVANCE.

☞ All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

☞ The back vols. can be furnished to new subscribers—and may be obtained of the following Agents:

NEW-YORK—M. H. Newman & Co., 199 Broadway.
BOSTON—J. Breck & Co., 52 North Market-st., and E. Wight, 7 Congress-st.
PHILADELPHIA—G. B. Zieber.

Advertisements—The charge for advertisements is $1, for 12 lines, for each insertion. No variation made from those terms

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, APRIL, 1849. VOL. VI.—No. 4.

Limestone Soil of Kentucky.

Remarks on the Agricultural Value of the Blue Limestone of Kentucky; with its analysis: By ROBERT PETER, M. D., Prof. of Chem. in the Medical Department of Transylvania University, Lexington, Ky.

THE region in which Lexington is situated, has long been justly celebrated for the great and lasting fertility of its soil; which, by the production of its luxurious vegetation, plentiful crops of corn, and herds of fat animals, evinces that it is rich in the elements which are essential to vegetable, as well as to animal growth.

Unlike the soil of many other parts of the world, heavy production does not quickly exhaust it. A field which has been cultivated in corn for twelve or twenty years, may be made almost as fertile as it was at the commencement, by resting it with a clover crop, or depasturing it for a time in grasses. It is, consequently, not the custom of the country to pay much attention to manures; and some of our farmers even consider the accumulations about their stables as a nuisance.

Her fertile soil enables Kentucky to export, from her rich counties, an immense number of hogs, cattle, mules and horses, a large quantity of hemp, and a considerable amount of Indian corn. The corn crop in Kentucky for 1847, was estimated at 62 millions of bushels, and during the past year, (1848,) at least 250,000 hogs have been sent abroad, to be slaughtered and consumed.

It cannot be supposed, however, that the soil will continue to maintain its fertility, under the immense drain made upon it by the exportation of its products; and old inhabitants have been for some time complaining that the long cultivated soil has undergone visible deterioration.

Since chemistry has given her assistance to agriculture, the reason of this has been made very clear. Every product of the soil takes from it, in notable quantity, certain mineral substances which are essential to its growth and formation. These are known to be, alkaline salts, sulphur and its acids, phosphoric acid, lime, oxide of iron, silica, &c. These substances are as essential to animal existence as they are to vegetables; and both animals and vegetables can no more subsist or thrive with a deficiency of these mineral ingredients than they can without water.

The saline and earthy matters, which form the ashes of plants and their products, are the same which are essential to the bones and other solids and the fluids of the animal body. Where they are abundant in a soil, other things being propitious, the vegetation becomes rich and matures a plentiful harvest, and animals grow and fatten easily on the products; for the plant draws them from the soil and works them up into forms adapted to animal nutrition. On the contrary, where they are deficient in the soil, vegetation is scanty, and the animal races dwindle and starve.

The fertility of the soil depends more on these mineral ingredients than on any other, although they really form the smallest relative proportion of the weight of vegetables and animals;—for the other ingredients of the organized bodies, viz: carbon, hydrogen, nitrogen and oxygen, are derived from the atmosphere and from water, which are universally diffused; while these mineral ingredients are the properties alone of the soil, and when present in sufficient quantity, even in pure, earthy matter of any kind. they stimulate the growth of vegetables, which by their final decomposition, soon fill the earth with humus, and form the rich vegetable mould.

Amongst the most important of these is phosphoric acid, which, in union with lime, magnesia, and perhaps oxide of iron, enters into the structure of all vegetables, and the more nutritious the vegetable substance, the larger is its proportion of the acid. The grains are peculiarly rich in it:—Boussingault remarks that no seed is known which does not contain it. Hence, a plant, growing on a soil which does not afford it, never matures its seed, and the production of seeds of any kind speedily exhausts a soil.

Phosphoric acid is equally essential to animal growth, it being a constituent part of all the organs of their body, and particularly of their bones, the earthy matter of which being mainly phosphate of lime.

An idea of the quantity of phosphoric acid which is annually taken from the soil, may be obtained by studying the chemical analyses of the ashes of vegetable substances.

Indian corn gave me more than 1 per cent. of ashes, of which 50 per cent. is phosphoric acid. Wheat gives nearly 2¼ per ct. of ashes of which more than 60 per ct. is phosphoric acid. Oats and rye contain it in but a little smaller proportion, and every 1,000 pounds of dried hay contains about 3½ pounds of this acid. In short, the ashes of wood and all vegetable substances, are rich in phosphates, and hence the utility of even leached ashes as a fertilizer.*

In every bushel of Indian corn sent out of the state, we export about one-third of a pound of phosphoric acid; and in the bones and body of every hog, there is at least two pounds of this substance; so that in her 250,000 hogs, exported during the year just terminated, Kentucky has sent off at least 500,000 pounds of this valuable ingredient of her soil. Taking into consideration the whole of her exports, in animal and vegetable products, the amount of phosphoric acid sent every year from the fertile counties alone, must be much above a million of pounds.

As this indispensable ingredient exists but in a small relative proportion in the best soils, continued exportation of products, without a corresponding importation of the mineral elements of animal and vegetable substances, must impoverish the country.

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* I refer the reader to *Boussingault's Rural Economy*, (translated by Geo Law, and published in 1845, by Appleton, N. York) for many interesting facts in this relation; and many reports of the analysis of ashes of vegetables are given by Dr. W. Knop, in the Vol. XXXVII of the *Journal fur Praktische Chemie*—p. 34

In some parts, Guano, which is rich in these matters, can be and is used, to supply phosphates. In England it is found advantageous to import bones, from a distance, and to grind them to powder, to spread them on the soil. Which application increased the product, in some places, in two and even three fold proportion.

In a country which consumes its own products where they are raised, and in which the animal excretions are not allowed to be washed away in the streams and rivers, the soil is kept fertile by the constant restoration to it of these mineral ingredients, in the bones and excretions of animals which are applied to it. And political economists see in this fact, apart from other considerations, an immense advantage in a *home consumption*, by home manufacturers;—in "placing the anvil by the side of the plow." But when, as is the case in Kentucky at present, there is a constant exportation of vegetable and animal products, which are rich in the most valuable and indispensible ingredients of the soil, the fatness of the earth is steadily and certainly transferred from the exporting to the importing country; and the land of the former will become poorer and poorer, unless these valuable ingredients are, from some source, resupplied to it.

Reflections of this kind caused me to turn my attention to the rock stratum which underlies this fertile region, with a hope of finding in it some compensation for this annual loss of the phosphates and the other essential elements of the soil. This rock is of the "Blue Limestone formation," a lower member of the *Silurian formation* of the English geologists. It is the equivalent of the "Trenton Limestone" of the New-York geologists; and like that, is full of the fossil remains of marine animals:—the shells, crusts, coralloid structures, of the ancient denizens of the primeval ocean, under which it was evidently deposited;—giving promise, to the analyst, of the presence of all those ingredients which are essential to animal as well as to vegetable structures, and which have been already referred to as existing in all fertile soils.

Our limestone presents various characters in its different layers; some being hard, of a semi-crystalline structure, and of a bluish grey color; other specimens are more earthy in their composition, more shaley, of a darker color, falling readily to powder on exposure to the atmospheric agencies; all being in layers of greater or less thickness, the solid masses being separated generally, by shaley matter.

The hard gray rock is quite durable in its nature, and is extensively employed for turnpikes, for the foundation of houses, steps and walls; but all varieties change to a dirty buff color on the surface, in time, by the peroxidation of iron; and disintegrate more or less rapidly, on exposure to the air: in consequence, doubtless, of the presence of protoxide and sulphuret of iron in the rock, which break up its structure when they unite with the oxygen of the air; as well as by reason of the presence of its numerous shells, and other fossil remains, which occasion minute fissures, into which water and air penetrate, and with the aid of frost, cause the rock finally to crumble.

The hard layers burn into very good fat lime, which makes good mortar, but in consequence of the quantity of oxide of iron present in it, the color is not as pure as is desirable for nice whitewashing.

But few trials have been made of the fertilizing powers of this limestone by our farmers, although it is so abundant and so easily to be obtained; no doubt because new land is cheap in the United States, and labor dear; more especially, because no immediate want of fertilizers is felt by our agriculturists. But on the edges of our McAdamized roads, the corn rows which receive the powdered limestone in the form of dust, are observed to be more flourishing than the others; and in places where the soil is very thin, and filled with fragments of the limestone, the product is always very good, when the season is not too dry. Gardeners, who have employed it on their small crops, speak highly of its utility as a fertiliser.

It has been the custom in England and other countries, as well as in some part of the United States, to use lime very freely on the arable land. It is, indeed, considered almost essential to the production of wheat; and enormous quantities of it are spread in some localities. A difference of opinion exists as to *the manner* in which the lime acts to improve the soil; for example, it is supposed that it aids the solution of hard vegetable substances;—that it brings the silex of the soil to a soluble condition, and that it warms the earth and stimulates vegetation in some indefinable manner. But it is probable, that if correct analyses were made of those limestones which are known to be the best fertilizers, another reason for its utility would be found in the presence in it of the essential mineral elements of vegetables, viz: phosphates of lime and magnesia, sulphate of lime, oxide of iron, potash, soda, &c.

Chemical analyses of limestones and of soils, as they are ordinarily performed, are of but little practical value even to scientific agriculturists, because they do not include the estimation of the phosphates and the alkalies; which are the really essential ingredients, but which, in consequence of their existence in comparatively small proportions, and because considerable labor and some skill are required to estimate them accurately, are usually overlooked by the analyst.

It would be far better, for agricultural purposes, to estimate *only* the phosphates and the alkalies, in a soil, a marl, or a limestone, than to give only the silex, the alumina, the oxide of iron, lime, and vegetable matter: which really are of less importance in this relation.

During the past month or two, in my leisure moments, I have submitted to analysis, several specimens of the Kentucky Blue limestone, and have been much gratified to find my anticipations realised in relation to its agricultural value, as will be seen by reference to the results given below.

Specimen No. 1, is of the hard grey limestone; it was dug out of a well in the city of Lexington; it contains geodes lined with brown spar, pearl spar, calc spar and fluor spar and the usual fossils; its specific gravity is 2.45 in a dry specimen. On analysis, it was found to be composed of the following materials; viz:

Carbonic acid,	36.675
Phosphoric acid,	1.350
Sulphuric acid,	607
Lime,	47.046
Magnesia,	900
Alumina and oxide of iron,	9 980
Fine sand and silicates,	1.790
Moisture and loss,	1.533
	100.000

Specimen No. 2, from the hard thin layers which are more superficial than the first in this locality, yielded:

Carbonic acid,	40.53
Phosphoric acid,	36
Sulphuric acid not estimated.	
Lime,	50.97
Magnesia,	66
Oxide of iron,	38
Alumina,	15
Sand and silicates,	6.38
Moisture and loss.	49
	100.00

In addition to these ingredients, potash and soda were obtained from the limestone, whenever the proper processes were employed; in one case as much as 0.0457 per cent. of potash; in another, 0.0058 per cent.

In two other specimens the proportion of sand, &c. was found to be as much as 13.5, and 20.3 per cent. As much variety, no doubt, exists in the composition as in the appearance of the different layers of the limestone.

Iron is present in the blue and grey rock partly in the form of protoxide; there is also some sulphuret of iron diffused throughout it, which by oxidation produces sulphate of lime or gypsum. Sulphur, it is well known, is an important element of plants, especially of the most nutritious kinds, as the cabbage; it is also found in the mustard, the turnip, and in almost all the animal tissues.

Our limestone therefore contains all the mineral ingredients necessary to organic nutrition; viz. phosphorus, sulphur, lime, magnesia, oxide of iron, silex and potash, and soda in small quantities.

Some specimens appear to contain a larger proportion of phosphoric acid than is stated above; one analysis gave me as much as 2.57 per cent. as estimated by the precipitated phosphate of iron. As the presence of this acid, in the rock, is a fact of great importance, and the processes for its correct estimation require great care, I have taken unusual pains to arrive at positive certainty in regard to it; and in consequence of my desire to separate it fully from all impurities, my estimation of its per centage is, no doubt, below the truth, from the unavoidable loss which this substance sustains in the various processes used. The chemist will understand this when I describe these processes.

1. The ground limestone was dissolved in hydrochloric acid, with a little nitric, and the solution filtered from the sand and silicates.

2. Pure ammonia, and chloride of ammonium, were added to the boiling solution, and the precipitate was, after careful washing, re-dissolved in a little hydrochloric acid. This contained oxide of iron, alumina and the phosphates.

3. Acetate of soda was boiled with the solution (2,) sometimes with the addition of some chloride of iron, which threw down all the phosphoric acid as phosphate of iron. There was generally enough oxide of iron in the limestone to combine with all the phosphoric acid.

4. The precipitated phosphate of iron was re-dissolved in hydrochloric acid, with tartaric acid and ammonia, and the phosphoric acid was thrown down from the solution by sulphate of magnesia.

5. This precipitated ammonio-phosphate of magnesia was re-dissolved in hydrochloric acid, and precipitated again by ammonia, and, after thorough washing, was ignited and weighed, and the phosphoric acid estimated.

Not content with this, the phosphate was dissolved in nitric acid, and the phosphoric acid carefully precipitated by nitrate of silver and ammonia: from the precipitated phosphate of silver the silver was removed as chloride, and by the evaporation of the liquid, the phosphoric acid was obtained in the glacial state, by gentle ignition in a platinum capsule.

The original precipitate (2) containing the phosphates, was also treated in another way. Dissolved in nitric acid, acetate of lead was added to its solution, until all the phosphoric acid was thrown down as phosphate of lead; which, after being well edulcorated, was re-dissolved in a little nitric acid, and the lead separated by means of sulphuretted hydrogen. The filtered liquid evaporated as above, yielded the glacial phosphoric acid; which, re-dissolved in water, was estimated as pyro-phosphate of magnesia.

In the glacial form, by this last process, the phosphoric acid weighed 3 per cent. after moderate ignition. But this acid is so hygrometric that it cannot be correctly estimated in the uncombined state.

In the estimation of the magnesia, the usual mode is to precipitate it from the filtrate* (2) by adding phosphate of soda; but as the ammonio-phosphate of magnesia is not wholly insoluble in a solution of chloride of ammonium, I used the process of Berzelius, viz: ignition with the oxide of mercury; or, what is still more convenient, a modification of the process of Boothe, as follows:—Sulphuric acid in sufficient amount was added to filtrate (2,) and the mixture was concentrated by evaporation. Alcohol, in equal volume was then added, and the precipitated sulphate of lime was washed with diluted alcohol. The sulphate of lime, ignited and weighed, gave the proportion of lime, while the filtrate gave on evaporation, the magnesia in the form of sulphate.

The proportion of carbonic acid was ascertained by the process of Fresenius.

I give this abstract of chemical processes that competent persons may be enabled to judge as to the value of the analyses.

It must be evident, from the foregoing facts, that the Blue Limestone of Kentucky, should it generally be found to resemble that above described, will be a valuable agricultural resource, when the soil begins to show the inevitable consequences of the constant exportation of its products; and that, with this immense source of fertilizing materials beneath our feet, we need never fear the thorough exhaustion of our soil.

One bushel of lime, such as specimen No. 1, containing about 1¾ lb. of phosphoric acid, will yield phosphates enough for 5 bushels of corn; while 2 or 3 bushels of lime would supply all that are carried away in the bones and body of a hog.

By actual experiment, within my own knowledge, of burning 2700 bushels of lime in one rude kiln;—the rock having been purchased at 50 cents per perch of 24¾ cubic feet;—the wood at $3 per cord, and the labor estimated at 75 cents per day,—it is found that lime can be obtained for 10½ cents per bushel.

Our farmers, with their own wood, and farm hands, can burn it much cheaper, and I do not doubt that if they make the experiment on a sufficiently large scale, they will find their labor and expenditure well repaid; whether they use it in the cornfield, on their wheat, or clover, or on the orchard. All vegetables require the elements which are found in it, and it cannot come amiss any where, when applied in the proper manner.

It may be used in the proportion of from 20 to 50 bushels to the acre; spread in the fall, on the surface, in the dry slacked state.

It is especially recommended for the potato crop. Potatoes, and particularly the stalks, are found to contain a very large proportion of phosphoric acid in their ashes, and it is probable that their liability to "the rot" may have some relation to the deficiency of phosphates in the soil. *Jan.* 31, 1849.

Suggestions for Farmers.

System, Order, and Economy.

In the last number of *The Cultivator*, it was shown how the absence of Order in relation to the plow, worked a loss to the farmer of more than three dollars per acre; and allusion was made to the necessity for sound judgment in the selection of tools, implements, and machinery for our farm purposes. To make this discretion more apparent, the following list of plows with their relative position as to merit, is selected from the various volumes of Transactions of the State Agricultural Society—the list cannot fail to be useful to every farmer, exhibiting a wide range in the force required for working them, and so far, is a guide to the selection, provided the material of which they are respectively made, is equally strong and good. It will be noticed that the resistance offered to our horses in plowing, varies according to the construction of the plow.

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* Filtrate, i. e. the liquid filtered from the precipitate.

from 225 pounds up to 500 pounds,—a difference of labor seriously affecting Economy.

Agricultural Mechanism, is by no means confined to New-York; therefore, before we proceed to examine the list alluded to, we may with signal advantage, examine the handiwork of our neighbors. As their mode of computing resistance differs from the method used in this State, the plows could not be conveniently arranged in the table; they use the Dynamometer in the same way as used at our State fairs, but the ratio of resistance is thus stated: if the force of the team applied is equal to the raising of 336 pounds over a single pulley, and the depth of the furrow is 6½ inches with a width of 13 inches, then multiply 13 by 6½ and you have 84 and a fraction; then if 336 pounds of force will take up and turn over 84 inches of earth, 112 pounds will turn 28 inches. It was in this way, the eastern plows were tried by the Massachusetts Agricultural Society, for their premiums of *one hundred* dollars, and *seventy-five* dollars, for the best plows—one plow for *lapping* the furrows, the other for *laying them flat*.

Tried in this way, the power in each case being 112 pounds, the plows respectively turned over the quantity of earth as stated in figures, and thus exhibited their relative resistance—i. e.

Plows for *lapping* furrows:—

Charles Howard's..............................	29½	inches
Ruggles, Nourse & Mason's, ...	24	"
John Wilson's, ...	21½	"

Plows for *flat* furrows:—

Prouty and Mears',........................	27½	inches.
This plow took the premium of $100.		
Charles Howard's,.............................	25	"
Ruggles, Nourse & Mason's, ...	24	"

Other plows were tried, but all offered greater resistance than the foregoing. The above claim the careful attention of the prudent farmer.

Let us now examine the list of plows tested in this state.

Makers.	Wheremade	Name of Plow.	Resistance.	Depth of furrow.	Widthof furrow.
S. W. Chase,............	Amsterdam,	Montgomery County	225	5 inch.	11 inch's
T. D. Burrall,............	Geneva,....	Shell Wheel,.....	241⅜	5.8	12.8
		Geneva,..........	325	6	13
E Sleight,............	Fishkill,....	Revenue Cutter,....	250	5½	12
Miner, Horton & Co.,.....	Peekskill, ..	Peekskill, ...	255		
A. Hawley,.	Brooklyn, ..	Bergen, ...	275	6	12
H. Delano, ...	Onondaga, .	Diamond,............	287½	6	13
M. H. Codding, ...	Ontario,....	American,..........	330	5½	14
J. Waite, ...	Albion,.....	Veto, ...	335	6	12
S. W. Hall,............	....	Williamsport, ...	337	6	12
P. Elyea,............	Livingston,.	Caledonia,..........	345	6	12
T. Mercer, ...	Peekskill, ..	Peekskill, ...	348	6	12
Miners, ...	....	Peekskill, No. 22,...	350		
Peter Proseus,............	....	Columbia,..........	350	5	13
Oxford,............	Chenango, .	Oxford, ...	371	6	12
Brainerd & Comstock, ...	....	Diamond,..........	375		
Wilson, ...	Oneida, ...	Oneida, ...	381		
J. S. Tefts,............	Erie,.......	Washington, ...	391	6	12
Hicks & Bailey,............	....	Wyoming, ...	383	6	12
E. Davis,............	....	Worcester County,	386	6	12
P. D. Wright, ...	Rochester, .	Cayuga County,....	388	6	12
E. Richardson, ...	....	Iron Beam,.........	388	6	12
C. Seymour,............	Lockport, ..	Opposition, ...	397	6	12
H. Wiard,............	Avon,......	Livingston County,.	400	6	12
E. Wilson, ...	Vernon,....	Diamond, ...	400		
Ruggles, Nourse & Mason,	Mass., ...	Eagle, ...	415	6	12
R. C. Stiles & Co.,........	Ontario,....	Ontario,............	431	6	12
Moore, ...	....	Self Sharpener, ...	437½	6	14
J. Van Bronklen, ...	Niagara, ...	Middleport,.........	438	6	12
Gaylord, ...	....	Auburn,............	475		
Asa Beebee............	....	Black Hawk,.......	475		
Bailey, Whitler &Co.,....	....	Utica,............	475		
J. C. Fitch,............	....	Livingston County, .	483	6	12
Wm. Frater, ...	Otsego, ...	Scotch Plow,.......	500		

It will be noticed that the Shell Wheel plow, and the Geneva plow, by the same maker, (Burrall of Geneva) are placed side by side, purposely, to draw attention to the effect of a well formed and well applied wheel; for these plows are in all respects the same, save only, the use of the shell wheel in the place of the land side; this wheel produces the difference stated in the table, in the draft of the two plows of more than eighty-four pounds in favor of the wheel; a difference which, if given by the wheel to other plows named in the list, would ptesent for our selection, a rare and most choice assortment. Thus, if the excellent "Center Draft" of Prouty and Mears, which I believe offers a present resistance of 292 pounds could be reduced by the wheel to 208 or 210 pounds, it would exceed every other known plow. The same as to Delano's Diamond, and and so also, as to Ruggles, Nourse and Mason's admirable Eagle, if it could be reduced by the wheel, to 331, we need look no further for all that is needful in the form of plows. That word *if* arrests our progress for the present; nevertheless, with the list before us, no farmer can be excused for *imperfect* plowing, let his soil be what it may. Any reasonable depth or breadth of furrow may be had,—the furrow slice may be laid perfectly flat and true, or it may be lapped with precision—our horses need no longer show galls and scars, nor upbraid us with cruelty; on the contrary, when they have toiled through the heat of the summer, and return home from the last furrow of the season, they will exhibit their fat and shining sides, gamboling in the last rays of the setting sun, as if to express happiness in a duty well performed, and gratitude to a liberal, careful master.

It is no small matter that plow makers present their work to us in a highly finished condition, and in this respect, we have reason to appland Prouty, Mears & Co., and Ruggles, Nourse & Mason—the polish of their mould boards and other metalic parts prevent a large amount of resistance, as I well know by the use of "a Center Draft;" in this matter, our eastern friends have shown *heretofore* more *order* and *economy* with neatness, than was to be found among us of New-York. *Now* however, I for one, am using plows equal in all *these* details, to those of Massachusetts.

A farmer always does *love* his horses, if his own heart is hung in the right place, and a man thus constituted will be loved by his horses; had they the power of speech, they would entreat us to seek for, and use, such plows as offer the least resistance to their willing shoulders, consistent with an expeditious and good performance of their work;—let us then give more attention, more consideration, to the due selection of these most important implements.

In making our selection, however, we must remember that the tool must be adapted first to the nature of our soil—so as most easily to raise it and move it—and next, that it be so constructed as perfectly to turn it over. In a stiff clay we find the long Scotch plow presenting a severe resistance, while our shorter breasted plows move through it with comparative ease: the reason is, that more surface is presented to resistance in the long plow. In light soils, this is not so important a consideration.

My own experience has led me to the use of Burrall's Shell wheel and the Geneva plow, Prouty & Mear's Center Draft, the Eagle and Chase's Amsterdam. I have others in use, but prefer the foregoing.

For many ages, the Harrow has been our familiar friend, without change in form or feature from the earliest time, until within the last twenty years,—and its uses have ever been to follow the plow, breaking the upturned masses into a pulverised condition; to draw out weeds by their roots, exposing them to the air and death; and to cover over seeds when sown on the prepared earth. It is somewhat remarkable that the importance of these operations should not have earlier produced improvements, leading to economy; nor is it less strange that on *many*, I had nearly said most farms, this operation is performed with an imperfect tool, or, in a most imperfect manner. The want of *Order* induces the first error; the want of System causes the latter—and from this also, we see too often, the custom of entrusting the harrow to boys, whereas harrowing is in fact, when *properly* done, a laborious business, for to be well done, we need fast horses, a *quick* movement and careful over lapping of the lines.

What is the inevitable consequence of slow and unsteady harrowing? or of work performed with an imperfect implement? The ready answer is, a rough and uneven field, unequal distribution of seed and its destruction by exposure; of course, a diminished product per acre, pressing its penalty upon the farmer, who ' don't care '—or thinks " its good enough,"—or " as good as his neighbors." Such men are without order or system; as to economy, they know not its meaning.

The chief improvement in the harrow, has been in its form, not effecting any very decided general advantage; but its defects have led to the introduction of another implement, the *cultivator*, which in a great degree, supercedes the harrow, and renders the second plowing of fields often useless or unnecessary.

The cultivator, when first introduced, was confined to the corn field and potato crop—but lately it has been so constructed and improved by Mr. Ide and others, as to follow the plow very successfully in the preparation of the ground—but more especially to perform all the necessary operations of a fallow after the first plowing.

This implement or cultivator, as made by Mr. Tracy, of Wayne county, and by him introduced into Ontario and Seneca counties, seems to be an admirable substitute for the purpose of cross-plowing, and all the usual work of the harrow; being so constructed as to cut six inches deep, or, only to skim the earth, as may be desired. Here then we have a labor-saving machine, for, as it is 4 ft. 6 wide, with four teeth in the rear, and three in the front row,—it acts at the same time, on a breadth of soil equal to at least four " bouts" of the plow—stirring the earth 6 inches deep. Substituting the cultivator for the plow, after the first plowing, the gain, by its use instead of the plow is, at least sixty-two and a-half cents per acre, or, the difference in cost between plowing and harrowing—an item of importance in every field of grain; the thinking farmer will readily find other advantages.

I cannot discover any trials of the cultivator, to show us the quantity of force required for its proper use, an omission on the part of our agricultural implement makers, of more importance than they imagine; let us hope that, hereafter more anxiety will be felt to prove the saving of labor or force, not by assertion but by *measure*, and thus save us farmers from much loss of time, and disappointment.

It was intended to follow the remarks on the plow, with a consideration of the *harrow*, *cultivator* and *seed sower*; the season however, for planting corn is so near at hand, and the corn crop is so important, that I venture a repulse from your well stored columns, to show if I may, the economy with which this most valuable grain can be raised, and is produced in this part of our State.

Long Island and the valley of the Mohawk, has heretofore produced a larger amount of corn per acre, but that advantage is equalised to us of the inland counties, by the greater economy of labor and possibly of system.

A machine is in use here, produced by the ingenuity of Mr. H. L. Emery, of Albany,* simple, and worked by a single horse; we call it the *Corn planter*, though it is arranged for the planting of any and every kind of seed in rows or drills. When this corn planter is solidly and strongly put together—and the ground is in proper condition for planting, we plant not less than ten acres per day,—one man and one horse only being necessary for the work. The rows of corn are placed three feet or three feet six inches apart, and the seed is dropped about six to eight inches asunder in the rows.

The after cultivation, or hoeing, is effected by the horse hoe. The following results have been derived from the use of these machines:

Plowing, harrowing, hoeing and preparing 21 acres for Corn, at $2.27 per acre, ...	$47 67
Planting 21 acres with Emery's Planter, in two days, man and horse, ...	4
Cost of 26 quarts of seed corn, at 75 cents per bushel, ...	6 51
Husking and housing in crib, at $3.17 per acre,..........	66 67
	$124 84

The yield of this field was moderate, being only 1600 bushels of ears, which at the above cost, is equal to seven cents and eight mills per bushel.

The yield of fodder was very large, but if we estimate it as low as 1½ tons per acre, then the cutting and housing of the whole fodder, say 30 tons, was $19. 06—which added to the cost of cultivation, makes an

aggregate of, ...	$143 90
Deduct for the value of the fodder, at $2 per ton, ...	60 00
	$83 90

Thus the actual cost of the 1600 bushels of ears is $83.90, or *five cents* 24-1000 *per bushel*—or for the grain alone it is *ten cents* 48-1000 *per bushel*. Such is the result derived from the *Corn Planter*, and *Cultivator*, and *Horse Hoe*, from a moderate yield of corn. Much better results have been derived by others, from the same system and order; and I think none will deny that economy is thus well studied and practiced. Agricola. *Seneca Co., N. York*.

Influence of Agricultural Periodicals.

That a great improvement has taken place among the agricultural population of the United States within the past ten or fifteen years, but more particularly in the eastern and middle sections, is a fact which I believe will not be denied. To what is this improvement chiefly to be attributed? I answer, and I think correctly, to the influence of agricultural periodicals and papers. Agriculture, although one of the noblest of callings, has been in times past grossly neglected. Like many occupations by which a subsistence may be obtained without much exercise of the mind, it began to be taken for granted that the exercise of the mind was not required, and was a matter of but little importance. Men farmed as their grandfathers had farmed, half a century before them. Agriculture, instead of improving, stood nearly still, or retrograded somewhat. Lands became worn out by bad tillage; and most of those who could escape from the plow, left their homes to seek out employment by which more money could be made with less hard physical labor. Here and there a man was to be met with who had become rich through trade or commerce, and had retired to a farm; but it was not the profit, but the pleasure of farming he had gone to enjoy. Matters were somewhat in this condition about the time of the establishing of the first agricultural papers. From that period to the present time, there has been a steady progression in agriculture.

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* For cut and description of this implement, see last vol. Cultivator, p. 329.

Let us glance at some of the benefits arising from these papers I know not how other minds may view it, but for myself I may safely say, that as a practical farmer, the opportunity afforded for the interchange of thought, through agricultural papers, is one of the greatest enjoyments I have. I welcome the monthly receipt of my paper with no common interest, for from it I always expect to derive some improvement. The suggestions, coming as most of them do, from practical men, are all worthy of consideration, and although they may not all be adapted to the particular situation in which we may reside, yet they will doubtless be found of value somewhere through our widely extended country. There is an amount of useful general information to be gained from the perusal of these papers scarcely any where to be met with in the same space. We not only gain knowledge on agricultural subjects, but we become acquainted with the geography, geology, climate and productions of our vast country from Maine to Florida. We learn among other things, the important truth that even in the cold and mountainous regions of our land, by the aid of science and improved tillage, farms are made to produce crops which will compare favorably with those raised upon the smoothest plains.

The farmer is a man whose business is *at home;* he can wander but little, but it does not follow that he must be ignorant. Sitting by his cheerful fireside of a winter evening, he takes his paper in hand and begins *his travels*. At one time he is among the best farms of New England, then in western New-York—then with the rapidity of the magnetic telegraph, he visits the western and southern states. For the trifling expense of a dollar or two a year, he becomes familiar with almost every portion of the Union.

There is a sociability too, so to speak, about agricultural papers, which is truly delightful. You become acquainted not only with their editors, but with a hundred others. Situated in some remote district, where perhaps most of those around you have not yet awakened to the importance of *book farming*, and are looking with doubts and misgivings upon your mode of farming, it is indeed, truly delightful to be holding mental intercourse with many of the best farmers of the land. There is many a man among that goodly fellowship of farmers, who should I chance to meet with, strangers to me though they might be, yet would I clasp them by the hand as friends. And are they not friends? Yes—friends in the cause of agriculture. They have labored to elevate that calling, great and noble in itself, but too long neglected and trampled in the dust.

Much has been done for agriculture, but much remains to be done. Some of the recent statements before the agricultural societies, show an improvement in culture and tillage that was not even dreamed of a few short years ago. The men of New England and the middle states need these statements to encourage them onward. What are we to do by and by? is a question sometimes asked by farmers of these parts. How are we to compete with the great west? Railroads and canals are multiplying—facilities are becoming greater every day for bringing produce from those markets to our seaports. They can raise every thing cheaper than we can. What are we to do? Not sit down and mourn over our fate—not sell our farms and move there too—but stay where we are, and work head-work. Raise 100 bushels of shelled corn where we formerly raised 20; raise 2 tons of hay where we used to grow one; keep 10 cows, and good ones too, and keep them well, where we formerly did 5.

We may not be able to do so this year, or next, but begin the good work and it will not be many years before we can. Industry, science, economy—must be brought to aid us in the fulfilment of our purpose.

Who are the men destined to rise in the agricultural world? I answer, those who read and reflect. Now, more than ever, has a time come when the farmer must think. He that worketh ever so hard with his hands, if he work not with his head too, will find his intelligent neighbor far outstripping him, with half the physical labor he exerts. And those men, so wise in their own conceit as to suppose that they can learn nothing from a book or paper, on farming, will discover their error, perhaps too late to retrieve it. H. C. W. *Putnam Valley, N. Y., Feb.* 1, 1849.

Profits of Sheep Husbandry.

Farming in Vermont.

Eds. Cultivator—"What is the most profitable course of farming in your section of the country, and what is the cost of producing a pound of Merino wool?" These inquiries are frequently made, and they are very important questions, particularly as to those who have been grain growers, and are about to engage in sheep husbandry, or in the making of butter and cheese. I find it very difficult to adopt any method which will give a true estimate of the cost of producing a pound of wool, or of butter and cheese. I find the estimates that have been made vary greatly in their results. Should I attempt to answer these questions, I could hardly hope for better success than has attended the labors of others. In this section, grain is out of the question. There is no more raised than is necessary for our own consumption, and of wheat not sufficient for that. To cattle and sheep, the farmers of Vermont look for the most of their profits of farming.

I have looked at the estimates of different individuals, of the profits of sheep husbandry and of dairies. There is one on sheep husbandry, by H. S. Randall, Esq., of Cortland, N. Y., which is incorporated in a report on the value of sheep husbandry, read before the agricultural society of Pendleton, South Carolina, and is published in the Patent Report of 1847, page 505. According to Mr. Randall's estimate, the profits of sheep husbandry, are over 27 per cent. on the capital invested; and the cost of producing a pound of wool less than three cents; and a calculation, based upon Mr. Randall's estimate, makes the profits of sheep husbandry in South Carolina, over 100 per cent. That report also refers to the opinions of others, and says:—"Three very respectable gentlemen in each of the States of Pennsylvania, New-York and Ohio, say that one half of the wool will pay all the expense, where the winter requires five months' feed." It is evident from the language of that report, that the estimate, corroborated by the gentlemen from Pennsylvania, New-York and Ohio, is received as correct; and little weight, probably would be given to any estimate that should vary greatly from one made from so experienced and intelligent a wool-grower, as Mr. Randall. I certainly should not attempt it until I had given the subject a careful examination. I do not question the statement of the product of A.'s 100 ewes; their product of both wool and lambs, is less than many flocks of that number have produced. The profits of 100 ewes ought not to be taken as a test of the profits of sheep husbandry. We might as well take the product of one cow as evidence of the profits of a dairy; or 120 bushels of corn from an acre, as a test of the profits of grain growing.

The flocks of sheep in this county range from 200 to 2000 or more. The average produce of wool per head in the whole state, does not exceed 2½ lbs.; and the average price per pound, for the last six years, has not been as high as thirty cents. I have the statement of one wool purchaser, of the amount of wool he purchased in the years 1842,—'3 and '4; the average per year was 110,000 pounds, and the average price 31½ cents per pound; and this was in Washington county, New-York, which produces the best quality of wool. The ncome in flocks of 500, above losses, seldom goes as igh as 25 per cent., many flocks not more than 10 per ent., and some no more than keep the flocks good. I ope none will engage in sheep husbandry with the expectation of receiving 27 per cent. on his capital invest-d. Farmers in general, are well satisfied if they receive 6 per cent. at the present low price of wool. Few farms will produce six per cent., over the expenses, on the cost of the farm. Some small pieces of neadow land may produce 12 or 25 per cent. on its ost. This subject ought to be investigated in reference o large farms, with buildings, woodland, &c. The air way, and the one best calculated to present the uestion in a practical form, is first, to ascertain the rue cash value of the amount of grass standing, that will be required to keep a certain amount of stock, and f this will sell for a sum that will be equal to six per ent. on the cost of the farm, the capital is considered n this section, to be a good investment. To change his into hay, and from hay and grass into wool, or buter and cheese, is a mechanical process; the profits rising from the operation, must vary according to the cience, skill and economy used by the operator.

In this neighborhood, hay in the barn is worth $6 er ton, and good, smooth meadow, that will produce ne, or one and a-half tons per acre,—the grass standng— is worth $4 per ton, and lands that produce one nd a-half tons per acre, will be equal to six per cent. n the cost, at $100 per acre. I estimate 20 tons of ay for the wintering of 100 good breeding ewes. The owest estimate is 15 tons. The pasture to keep 100 wes and their lambs through the season, cannot be obained for less than $36—ewes and lambs cannot be urned off until after shearing. If 33⅓ acres will keep 100 through the winter and summer, such lands must e worth here $48, or allowing but 15 tons of hay to he 100 ewes. There are lands in this county that nay produce that amount of hay and grass, that can e purchased for $20 per acre; but they lie on the mounain, where the hay cannot be taken away without reat expense. In passing through Cortland county, saw no such lands. The difference in the result of Mr. Randall's calculation and mine, arises from the different value we put upon the lands. Taking the same umber of acres and ewes, my estimate would be as ollows:

buys 33⅓ acres of land, at $48 per acre,	$1600 00	
0 ewes, at $2,	200 00	
utting and curing 11 acres of above land,	18 00	
Vashing and shearing,	5 00	
ummer care and salt,	10 00	
Vinter and spring care,	30 00	
oss,	4 00	
		$1867 00
eceipts—390 lbs. of wool, (the same as by Mr Randall's estimate,)	$118 71	
0 Lambs, at $1,	80 00	
		$198 71

If the owner let his land and sheep, the account ould stand thus:

terest on the money paid for land and sheep at 7 per cent.,	$126 00	
ther expenses as before,	67 00	
		$193 00
eceipts as before,		198 71

By my estimation, sheep husbandry is good business. he owner of the land and stock, gets 7 per cent. intest on his capital; and the tenant gets $5.71 over full ay for all his labor. I have omitted the credit for maure, as that must be returned to the land.

I will now take a farm in this county worth $7,000, leasantly located and conveniently situated for school d meeting, with good buildings, orchard, and woodlands. This farm will keep 500 sheep, two cows and a team to carry on the farm. The owner stocks the farm with sheep, hires all the work pertaining to the sheep, and lets the cows, team, orchard, &c., and receives one half the avails of them.

Interest on the $7,000. at 6 per cent.,	$420 00	
500 sheep at $1.25—$6.25,	37 50	
Cutting and curing 50 tons of hay,	100 00	
Summer care and salt,	12 00	
Washing and shearing,	25 00	
Winter and spring care,	75 00	
		$669 50
Deduct the receipts over the wool,		275 00
		$394 50
Receipts.—1375 lbs. of wool, at 33⅓ cts. per lb.,	$458 00	
25 per cent increase,	125 00	
Receipt from plow land, &c.,	150 00	
		$733 00

Cost of producing 1,375 lbs. of wool, $394, equal to 28¾ cents per lb.

According to this estimate, the owner, by stocking his farm with sheep, has a larger income than by selling his hay, and by this process he keeps all the manure. This is a good dairy farm. Let it now be stocked with cows—500 sheep are equal to 50 cows. I do not believe that the income from cows managed wholly by hired help, would be as great as from sheep; everything pertaining to the management of a dairy requires extraordinary care. I will mention one fact to show what a little negligence may do to lessen the profits of a dairy. The dairyman had no cold stream of water to cool his milk and made use of ice,—the curd from the milk, when the ice was used, weighed 90 pounds. The next day after his ice failed, the curd from the same quantity of milk weighed but 70 pounds, of course inferior in quality. This loss must be equal to $1 per day. Let this farm be stocked with cows, be let out to an experienced dairyman, and the whole receipts will be over $2,000. I know some dairies where the income from the cows will average $40 per cow, and others, not over $17. The cost of producing a pound of cheese in one of these dairies, is double that of the other. Some of this difference may arise from a difference in the goodness of the feed of the cows. There are, as far as my knowledge extends, much greater improvements made in the management of dairies than of sheep. Let the same care, skill, and attention in the management of sheep as there are in dairies, and the profits of sheep husbandry would be increased 100 per cent. I have had considerable experience in both. I formerly kept a dairy and made it profitable. I keep from five to six cows now.

When I engaged in sheep husbandry, I had a fine flock of Merinos. For several years, I suffered great losses; I had neither sheds nor experience to make sheep profitable. It was the opinion of wool-growers at that day, that sheep must not be confined to warm sheds. It was no uncommon sight in the spring of the year, to see 200 or 300 lbs. of pulled wool, and from 60 to 80 dead lambs. These were heavy drawbacks upon the profits and pleasures of sheep husbandry. Wool then brought from 55 to 75 cents per lb. and was the only income, as the increase did no more than keep the flock good:—the average amount of wool per head was not over three pounds. I have now changed my whole management. I keep through the winter, from 300 to 350 sheep; from them I select generally 110 ewes, over two years old, for breeding—never breeding from a ewe that will not produce at two years old, over four pounds of well-washed wool. I breed from the best rams I can obtain. I keep my sheep closely confined from the time they are put to hay until they are turned out to grass. I have 200 at one barn one mile from my house, about one-half of them lambs;—these are fed on lowland hay, twice a day, without any grain of any description. They have access to good water, and good Turk's Island or rock salt at all times. The flock kept at this barn has, for the last three years, been taken directly from the pasture to the barn, and there confined until they are turned out again to pasture. I commenced with hay on the 22nd, 23rd and 26th of November; turned to pasture the 6th, 9th and 13th of April—average time to hay being 19 weeks. Breeding ewes must be kept to hay at least two weeks longer. This year, this flock was confined on the 15th of November. There were three or four weeks of warm weather after this, during which sheep might have *lived* by grass. My breeding ewes, with the stock rams, are fed eight quarts of corn per day. I estimate 20 tons of hay, or what is equal to that, in hay and grain, for wintering 100 sheep. I keep an account of the sales of my wool and sheep, and will give the product of my sheep for the last three years, which is larger than any previous years', except one, and that was caused by the price of wool being very high that year.

Nov. 12, 1845, I had 309 sheep—Nov. 12, 1848, I had 319 sheep, being an increase of ten, and somewhat improved in quality.

I estimate the cost of keeping, the same as if I purchased the hay, and hired the pasture—calling the flock 300.

For 100 breeding ewes, 20 tons of hay, at $6 per ton,....	$120 00
For 200 other sheep, 30 tons,..............................	180 00
Pasture for 100 ewes and their lambs,....................	36 00
Pasture for 200 sheep,......................................	40 00
Washing and shearing,......................................	15 00
Winter care, and salt for the year,.......................	20 00
	$411 00

Receipts.—Wool for the first year, 1846—1238 lbs., at 40 cents per lb.,...	$495 20
Clips of 1847—'8 not sold, worth now, say,..............	800 00
Sale of sheep, 1st year,....................................	380 00
do 2d year,....................................	509 00
do 3d year,....................................	416 00
	$2600 20

I have not included in the expense of keeping the sheep, the interest on the capital; that can be done by others. It must vary greatly in different locations; also, in the value of the sheep.

For the last ten years, I have not lost one per cent. of old sheep, nor over two per cent. of lambs. Of the flock of 200 kept in close confinement, I have lost but three during the three years past, and so far on the fourth year; one of these got hung in the rack, and the other two died with the stretches. Not one during the three years has scoured, or been in any way sickly.

In 1826, I had over 150 full blooded Merino ewes and 200 grade sheep, and 1100 pounds of wool was nearly the whole amount of the income that I received from them. The labor of taking care of them was twice as great then as now, and the cost of keeping them much greater. I am now convinced that a flock of 500 or more, can be made to produce as well as a smaller flock. The cost of producing a pound of wool must vary according to the amount of wool produced per head, for it costs no more to keep a sheep that will yield four pounds of wool, than one that yields but two pounds. This alone diminishes the cost of producing a pound of wool; and if the increase of the flock should be equal to 33⅓ per cent., the cost is still more reduced. The cost of producing must decrease, as the flock increases.

A small portion only, of the farms in Vermont, are suitable for dairies. No lands in New England are more productive than the valleys of Battenkill and Otter creek. A large portion of the pasture lands are too remote from the buildings, and in many respects unfit for dairying. Yet they are productive; and though they are high, rocky side-hills, make the best of sheep pasture. There are some of 400 or 600 acres in a body, suitable for a farm, having a suitable portion of excellent meadow land, producing from half a ton to two tons of hay per acre. One of these farms, of about 500 acres, with a house and two barns, was purchased for $2600. This farm will keep 40 or 50 cows, or 500 sheep—more than some farms that cost $7000 will keep.

I know of one dairy of 20 cows that produces 10,000 pounds of cheese for sale, 300 pounds of cheese for the family, and 600 pounds of butter; this, with calves, whey and milk for hogs, will average over $42 per cow. This dairy is managed by one man, his wife, and one young man and a girl. Another, with the same number of cows, and one-third more help, does not produce one-half of that amount. In the trial of a case in court, a short time since, it was proved that 100 pounds of dry hides had been so managed as to produce 160 pounds of good sole leather, and in one case, as high as 182; while another, with unskilful management, produced but 130 pounds, and it is said that leather, giving the most weight, is worth two cents more per lb. than the other. This difference is caused by knowing how to open the pores of the hide to receive the tan, and then, to use the words of the manufacturer, "pursue the same course that you would to fat a hog,—feed as much good feed as the hide will receive without clogging it." This principle will apply to any product of the farm. The more flesh you put on an animal you fat, or the more butter and cheese you make from the same quantity of milk, the more valuable is the article by the pound. In the case of the tanner, let the unskilful manager tan the same amount of hides that the other does, and the difference in the receipts from the leather, (on account of the greater number of pounds and the increase in price,) would be more than $6,000 per annum. The unskilful manager has one advantage over the other; it does not cost him half as much to transport his produce to market.

That is evidently the most profitable course of farming, that is managed best. A moment's reflection will satisfy any farmer of the folly of changing from one course of farming to another at every rise and fall of the prices. There seems to be a greater disposition in wool growers to jump out of the business at every fall in the price of wool, than in any other class of farmers There is no reason for that. Beef, pork, butter, cheese, grain and wool, are articles of general consumption, and will, in a cycle of five years, command fair prices Nor has wool fluctuated more, if as much, as most other articles. Flour has varied from $12, to $3.75; pork from $23.13 to $9.27; beef from $14.98, to $5.75; butter, cheese, cattle, and horses, as much. Let every wool grower follow the rules for breeding that are established for all other kinds of stock among good husbandmen; see that his sheep are provided with water and warm sheds, which may be done at little expense and he will, in this cold, windy country, save much fodder; increase greatly both the quantity and quality of his manure; and by good attention to feeding, he may add 25 or 50 per cent., (just as he pleases) to the value of his wool, and the increase of his flock. But so long as sheep husbandmen manage their sheep, (and many do) as the French Canadians do their horses, permitting every thing to breed that has hoofs, whether they can chew the cud or not, they have no reason to look for any thing better than a flock of miserable *half wooled Keenucks*. If such a flock ever increases, the increase must be sold for 50 cents per head or less. for pelting; or the purchaser be permitted to select the best at 80 cents or $1 per head.

With all the light we have on the subject of improvements, we must agree with those who say—"After all your talk about science in agriculture, these are not the men who make money and get rich." They may not be the men that get rich. They make money and spend whatever may be necessary for their comfort and the improvement of their minds. A 6 by 8 country newspaper would cloy the literary appetite of these no improvement farmers, and a pistareen would generally cover all their subscriptions for pious and charitable purposes. Such wool-growers had rather pick a dead sheep than pay out a York six-pence for improvements in breeding animals or sheds.

Now after all this long talk, I must confess my utter inability to answer either of the questions at the head of this article, in a manner to satisfy even my own mind. I therefore leave it to others, to decide which is the most profitable course of farming, and make their own estimate of the cost of the articles they produce; being convinced they will feel justified or condemned, according to the greater or less amount of income produced from the capital employed. J. S. **Pettibone**. *Manchester, Vt., Jan.* 16, 1849.

The Poultry Yard.

Varieties of the Domestic Fowl.

The Dorking Fowl.—This breed takes its name from having been formerly bred chiefly in the neighborhood of Dorking, a town in Surrey, England. They were originally distinguished as having five toes to each foot, and as being of a white color. Their origin is not positively known. Some have supposed the breed to be of great antiquity, and in support of this hypothesis, have referred to the fact that five-toed fowls existed anciently in Greece, as noticed by Aristotle, and that Pliny and Columella spoke of similar fowls being known in Italy in their day. But we do not see that there is the least evidence that those fowls were Dorkings; or that the Dorkings have descended from them. Certainly, the circumstance of both having a supernumerary toe, is of itself no proof of affinity of blood. It is by no means, a peculiarity confined to the Dorkings; the writer has in several instances seen it in the Polish, and in the Bantam breeds. There is no doubt that it is a mere freak of nature, similar to the production of an extra finger or toe in some families of the human race.

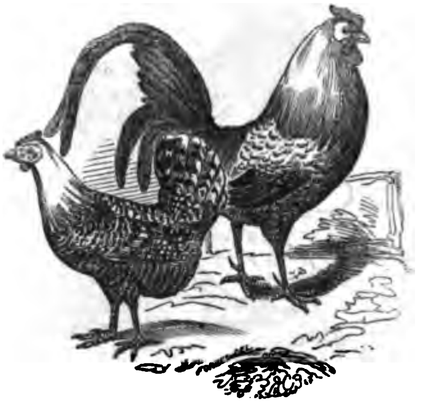
Arthur Young, in his *Survey of Sussex*, written in 1813, says—"The Dorking Fowls, as they are called, are reared in the weald of Sussex, but the finest market for them is Horsham. The five-clawed breed have been considered as the best sort; this, however is a great mistake, and it took its origin in some fowls with this peculiarity, that happened to be very large and fine, which laid the foundation of what has since been called the Dorking or five-clawed fowl. *** It is a bastard breed."

Dickson, in his treatise on poultry, says of the Dorking—"It is very probable that this large breed is a cross between the Malay, or shack-back [shake-bag,] and the game variety." The same idea is advanced by a writer in the *Scottish Quarterly Journal of Agriculture*, vol. VI. p. 381. Others have supposed the breed originated by a cross of the Malay and Poland, or Hamburgh fowl.

Martin objects to the idea that the Dorking fowl is of Roman lineage, and observes that if it was of ancient introduction, it is surprising it should, until lately, have been so isolated in its locality. He alludes to the fact that five-toed fowls are found in Germany.

But though the Dorking was formerly represented as a five-toed variety, and as being uniformly of a white color, many of the best known under that name of late years, have had only the customary number of toes, and have been of various colors. In fact it is stated by Martin, whose work was published in 1848, that those of a white color are now seldom seen." He adds—"During a recent visit of some weeks to Dorking, though we visited the market regularly, and explored the country round, on one or two occasions only did we meet with pure white birds. In all, however, more or less white prevailed; but the cloudings and markings of the plumage were unlimited. Many were, as we observed, marked with bands or bars of ashy gray, running into each other at their paler margins." Those which he saw, had the five claws; but Dickson and several other writers state that many have only the ordinary number. Such is also the case with many we have seen that were bred from imported stock.

In size, the Dorking ranks next to the Malay tribe. It is short-legged, and large-bodied, and readily accumulates flesh, which is of good quality. The hens are good layers. The breed has been introduced from England, and has been bred in this country for several years. They have succeeded well in many instances, though we think they are generally more subject to disease when young, and have less hardiness of constitution, than some other varieties.



41—BOLTON GREY, OR CREOLE FOWLS

The Sussex fowls, which are said to be more or less crossed with the Dorking, are considered some of the finest in England. They are described as longer in the body than the Dorking, and as equalling them in weight.

The Bolton Grey, or Creole Fowl.—This is a very handsome variety, the origin of which we are unable to trace. The writer first saw it upwards of thirty years ago, under the name of the "Leghorn breed." In size, the Creoles are rather less than the ordinary game fowl. Their bodies are round and plump; legs short, sometimes yellow, occasionally lead-colored; heads small, finely turned, and generally surmounted with rose combs. The best of the variety have the neck-feathers pure white, those of the body white, with small black spots, sometimes running into a grizzle; the tail-feathers darker, with transverse black bars. The tails of the hens are unusually elevated, and are spread out, like a fan, during the laying season. They are chiefly esteemed as layers. It is one of the most ornamental varieties we know.

The Bantam Fowl.—The origin of this variety, as we have shown from Martin, (see current vol. pp. 18, 19,) is the Bankiva jungle-fowl; and it received its name from having been brought from a district or town in Java, called Bantam.

These fowls are the least in size of all the gallinaceous tribe. There are several varieties. Some have the legs plumed with long feathers, down to the toes; but the clean-legged varieties are usually most esteemed. There is a very handsome variety which is often red, with a black breast. But the most celebrated breed, is that known as Sir John Sebright's (fig. 42,) it having been brought to great perfection by that gentleman, after years of care and attention. It is thus described by Martin:

"It is very small, with unfeathered legs, and a rose comb and short hackles. The plumage is gold or silver spangled, every feather being of a golden orange, with a glossy jet black margin; the cocks have the tail folded like that of a hen, without the usual recurved drooping sickle feather, or rather these feathers are abbreviated, straight or nearly so, and broader than usual. Hence the term *hen-cocks* often applied to them. But although the sickle feathers are thus modified, no bird possesses higher courage, or a more gallant carriage. The attitude of the cock is indeed singularly proud, and we have often seen one of them bear himself so haughtily, that his head, thrown back as if in disdain, has nearly touched the two upper feathers of his tail. Half-bred birds of this kind are not uncommon, but birds of the pure breed are not to be obtained without trouble and expense; indeed, some years ago, it was almost impossible to procure either a fowl or an egg."

49—SIR JOHN SEBRIGHT'S SILVER BANTAMS.

Bantams are, of course, kept chiefly as a curiosity—they are *fancy fowls*. The hens are good layers, and the eggs are of delicate flavor. The flesh is also fine in the grain, and of superior quality; but they are too small to be saleable in the market.

In addition to the varieties of fowls above enumerated, there are some others which deserve a passing notice. Among these may be mentioned the following:

THE PERSIAN OR RUMPLESS FOWL.—This breed is chiefly remarkable on account of its being destitute of a tail. It is supposed to have been brought originally from Persia. We are not aware that the breed possesses any particular valuable quality. It is not uncommon in this country.

THE FRIZZLED OR FRIESLAND FOWL.—According to Martin, this breed is originally from Eastern Asia, and is often seen in Java, Summatra, and in India. It is occasionally met with in America, but is not common. It is a mere variety, and not a distinct species, as some have supposed. It takes the name of *frizzled* from the feathers—with the exception of those of the tail—being turned or curled towards the head, giving the fowl the appearance, as has been facetiously remarked, of having been "drawn backwards through a brush-heap." They are tender—the feathers do not afford protection against wet, and they are unable to bear exposure.

THE SILKY FOWL.—This is another accidental variety, which Temminck described as a distinct species under the name of *Gallus lanatus*. We have known several instances of fowls of this description having sprung from those of the ordinary character. They are more difficult to raise than common fowls, owing to their destitution of feathers.

THE RUSSIAN FOWL.—This appears to be only a variety of the crested fowl, differing but little from the Polish and Hamburg breeds, excepting that it has, in addition to a large top-knot, long feathers, like a beard. springing from the under side of the throat.

The terms "**BARN DOOR FOWL**," and "**DUNGHILL FOWL**," are applied to all fowls which are of no particular variety, and in regard to the breeding of which no particular attention is paid.

We will remark in conclusion that, though we do not think it advisable that every person who keeps fowls should become a professed *fancier*, yet we think with Martin, that "more systematic care should be paid by the farmer than is generally done, that less should be left to chance, and some discrimination exercised in the choice of stock. We do not claim for the fowl a weight in the scale of importance equal to that of the ox, sheep or hog; at the same time we contend that the importance of poultry is greater than at first sight might appear; consequently, that all attempts to establish good breeds, at once hardy, white fleshed, quick fatteners, and abundant layers, are meritorious; nor indeed are the labors of the professed fowl-fancier to be regarded as useless. Were it not for his labors and care, the continuance of no breed, it is to be feared, would be effected. There would be no stocks to which to apply, by way of correcting the degeneracy of any race."

Value of Bones as a Fertilzer.

EDS. CULTIVATOR—In the slight measure of agricultural reading which it has been my good fortune to enjoy, I have frequently been surprised to find. there were those who, to judge by their writings, were in doubt respecting the great value of bones as a manure. With us, their exceeding great value has long since passed to a proverb. Our most stubborn farmers,—those who have been the most wedded to their old notions, and the most opposed to all *new* things,—have ceased from doubting, and not only admit their fertilizing properties but use them freely; but, as I said before, there appears to be some who are yet skeptical, and who can not realize the important fact, that these apparently indestructible matters contain properties of the most fertilizing character. For their benefit then, with your permission, I will use the columns of your valuable journal. to lay before your readers, some facts which have come under my observation, and which have not only convinced me, but likewise all those who have been familiar with them.

Some twenty or twenty-five years since, on the banks of this beautiful stream, from the banks of which I am now writing, and the name of which I have assumed as my agricultural *nom de guerre*, there existed a farm. which, as has been but too frequently the case, was worn and exhausted to a degree that those who see it now, for the first time, would scarcely credit. It would not convey an accurate idea of its sterility, were I to say, it had been exhausted by excessive cropping, for that would only imply that the prolific property of the soil had been spent; but in this instance, not only had that been the case, in the fullest sense of the word. but the soil itself had been washed from its whole surface. It was almost surrounded by the waters of this stream, and being light and loamy, it had been washed into chasms and gullies in every conceivable manner. I can even now remember, when a boy, looking with compassion, upon its poor, miserable and forlorn appearance.

At about the period I have mentioned, it was purchased by Mr. W., a bone grinder, of Philadelphia.

—He employed an Englishman to farm it for him. I mention this matter, because at that time it would have been doubtful whether any of "our *free* and intelligent fellow citizens," could have been induced to stoop so low as to cart dry bones; but be that as it may, the course pursued by these persons—landlord and tenant—was to haul on bones of all kinds, principally however, ground bones and knuckle joints. I am sorry I cannot give you the quantity they put to the acre; but as I only wish to convince the skeptical, that there is virtue even in dry bones, it is not of so much importance. Suffice it then to say they were put on liberally.

When it was purchased by Mr. W., it would have been impossible for any person to have made a respectable living from it, even had it been given to them free of rent; but when he sold it, some ten years afterwards, it was decidedly one of the most productive farms in the neighborhood. From having been so poor that no other grass than red clover would grow on it, and not over ten bushels of corn could be produced to the acre, it was, in the short space of time mentioned, so much improved in fertility, that from one and a-half to two tons of timothy hay, or fifty or sixty bushels of corn could be raised to the acre, one season with another. After it passed from the possession of Mr. W., it went through the hands of various persons, either as owners or tenants, every one of whom pursued the skinning process. It was cropped and re-cropped, much hauled off and but little hauled on, and farmed without any regard to maintaining its fertility; but notwithstanding all this, it still, after fifteen years of constant skinning, maintains the character of being a most productive and valuable farm.

After Mr. W. sold this, he purchased another just as poor as the one mentioned; with this difference however, the latter one was level, cold and clayey. He pursued the same course with the latter that he had heretofore done with the former;—and the result was precisely the same. After a few years cultivation, in this manner, the improvement was so apparent, and his crops were so luxuriant, that our old-fashioned, plodding farmers were compelled to admit, that, in this instance at least, bones had proved a most powerful fertilizer.

I might here rest my case and claim a verdict in my favor; but I have, in my mind's eye, one more which is perhaps as conclusive as either of the others.

Some fifteen years since, a gentleman purchased a farm very much of the character of those mentioned above. He was desirous of having it brought to a higher degree of fertility. To do this, he began to haul manure from the city of Philadelphia, a distance of some ten miles; but he found the cost, wear and tear, and destruction of horse flesh, were more than he bargained for, and accordingly he soon abandoned it. Just at that time, he engaged the scraps from a button factory—these are the pieces of bone after the button has been sawed out—he spread them on his land at the rate, I think, of seventy or eighty bushels per acre; and now there are few farms more productive than his, made so almost solely by the use of this manure.

I might go on for a week, instancing cases wherein this same result has followed the same course, just as invariably as the sun traces its course through the heavens; but it would exhaust your patience; nevertheless, at the risk of doing so, I cannot refrain from giving you my own experience in the matter.

Four years since, I put in some wheat, part with thirty bushels of ground bones to the acre, which cost some ten dollars; and along side of it another piece, with stable manure, at a cost of fifteen dollars per acre, at city prices. At harvest, that part manured with stable manure was much the best, fully equal to the difference in the cost. The year following, both parts were in grass—the following year in corn, and after that in oats, in all which crops, that part manured with bones was decidedly the best; the crops on it were fully one-third greater.

The following season I put in three pieces of wheat, one with about twenty loads of barn yard manure, one with fifty bushels of poudrette, and the last with fifty bushels of ground bones to the acre. At harvest, the part manured with poudrette was the best; the part manured with yard manure the second best; and the part with bones almost an entire failure. That season the fly was bad, and this part having a late start, was harvested by them so completely that I did not get back my seed; but I made it all up the last season with grass; for the product of that part on which bones had been put, although before the poorest part of the field, was greater than that of either the others.

The following season I pursued the experiment still further. In putting in wheat, I selected two lots of an acre each, lying side by side, of precisely the same kind of soil, formed from the disintegration of mica and quartz. On one I put twenty loads, two horse wagon loads, of barn-yard manure which had been housed from the rains, and had been well tramped by the cattle; on the other, fifty bushels of the refuse bones from an ivory black factory, consisting of those parts of the animal frame which were not firm enough for the manufacturer's purpose, and mixed with some portion of boiled animal muscle, the whole costing about ten dollars per acre. The result of this experiment was, that where the yard manure had been put, the wheat, in the early part of the season was much the best, and remained the best at harvest, although by that time, the difference was not so perceptible; but when, last season, it was mown, the difference was greatly in favor of the bones. The product was so much greater, that skepticism itself conld not raise a doubt.

I have been sorry a hundred times since, that an accurate measure of the products of the various trials was not taken; but as they were undertaken merely for my own satisfaction, and with no thought of publication, it was passed over as not worth the trouble.

Whether the facts warranted above are such as to convince any one of the unequalled value of this manure, both as to its economy and lasting properties, is for others to determine; but if they should not do so, my advice would be, to any practical farmer who doubts, to try from ten to fifteen dollars' worth to an acre upon his wheat crop, spread broadcast and harrowed in; and if that does not convince him, he must indeed be hard to satisfy. PENNEPACK. *Lower Dublin*, *Pa.*, *Feb.* '49.

The Veterinary Department.

Stretches and Scours in Sheep.

EDS. CULTIVATOR—Your correspondent, R. G., of Jefferson county, Ohio, wishes some information in reference to the cure of scours and stretches. I would inform him that the first indication in the cure of disease, is, to remove the predisposing or direct cause.

"The disease was, perhaps, in the first place, induced by feeding on green frosted oats, and clover, late in the fall." Then I would advise Mr. R. G., and every other farmer, not to suffer their animals to feed on such indigestible materials again, or any other article of the same nature.

"As to stretches," your correspondent states "that it is most troublesome and fatal, amongst those flocks closely yarded, and fed exclusively on dry feed." It would be something very remarkable if the flock did not manifest some signs of stretches, constriction, or constipation; let any one of the human family confine himself to a narrow atmosphere, and subsist on hard ship-bread for a short time; obstinate constipation will in nine cases out of ten, supervene. Medicine has but little power over such derangements, while the exciting or direct cause exists. This will, in some measure, account for the unfavorable result, attending the administration of Mr. Morrell's prescriptions.

"I have always found that the quantity of medicine necessary to act as an *opiate* on this dry mass," alluding to that found in the maniplus, " will kill the animal. If I am mistaken, I will take it kindly to be set right." You are quite right.

Let us see what Professor J. A. Gallup says, in his Institutes of Medicine. Vol, II. p. 187. " The practice of giving opiates to mitigate pain, &c., is greatly to be deprecated; it is not only unjustifiable, but should be esteemed unpardonable. It is probable that for forty years past, opium and its preparations have done *seven times the injury* that they have rendered benefit " —killed seven where they have saved one! Page 298, he calls opium the " most destructive of all narcotics," and wishes he could speak through a lengthened trumpet, that he might tingle the ears" of those who use and prescribe it. All the opiates used by the Allopaths, contain more or less of this poisonous drug. Opiates given with view of softening the mass alluded to, will certainly disappoint those who administer them; for, under the use of such " palliatives," the digestive powers fail, and a general state of feebleness, and inactivity ensues, which exhausts the vital energies.

It will be found in stretches, that other organs, as well as the "maniplus," are not performing their part in the business of physiological or healthy action, and they must be excited to perform their work; for example, if the food remains in either of the stomachs, in the form of a hard mass, then the surface of the body is evaporating too much moisture from the general system; the skin should be better toned. Pure air is one of the best, and most valuable of nature's tonics. Let the flock have pure air to breathe, and sufficient room to use their limbs, with proper diet, and there will be little occasion for medicine.

In scours, the surface evaporates too little of the moisture, and should be relaxed by diffusable stimulants in the form of ginger-tea. The treatment that I have found the most successful, is as follows: take four ounces raw linseed oil—two ounces of lime water—mix. Let this quantity be given to a sheep on the first appearance of the above disease; half the quantity will suffice for a lamb. Give about a wine glass full of ginger-tea at intervals of four hours. Let the animal be fed on gruel, or mashes of ground meal. If the above treatment fails to arrest the disease, add half a teaspoon-full of powdered bayberry bark to each wine glass of tea. If the extremities are cold, rub them with the tincture of capsicum.

" The feeding of pine boughs, we have formerly practiced and think to be useful." Eds. of Cultivator. Pine has a revulsive action on the skin, is stimulant and diuretic, and if used occasionally might be the means of preventing many forms of disease in animals. GEO. H. DADD. *Boston, Feb.*, 1849.

Diseases of Cattle.

ABORTION IN COWS.—The cow is more subject to abortion than any other of our domestic animals. She is liable to this at different periods of pregnancy, from the fourth to the eighth month. Mr. Youatt remarks, what has been often observed by others, that " abortion is sometimes singularly frequent in particular districts, or on particular farms. It seems to assume an epizootic or epidemic form. Some have imagined it to be contagious. It is destructively propagated among the cows, but this is probably to be explained on a different principle from that of contagion. It has been said that the cow is an animal considerably imaginative, and highly irritable during the period of pregnancy. In abortion, the fœtus is often putrid before it is discharged; and the placenta or after-birth rarely or never immediately follows it, but becomes decomposed, and as it drops away in fragments, and emits a peculiar and most noisome smell. This smell seems to be singularly annoying to other cows—they sniff at it, and then run bellowing about. Some sympathetic influence is produced on their uterine organs, and in a few days a greater or less number of those that have been kept together likewise abort."

In regard to treatment of abortion, Mr. Youatt directs, that if the farmer has ever been troubled with this pest, he should closely watch the approaching symptoms of casting the calf, and as soon as he percieves them should remove the cow to an apartment by herself. That he should bleed her, and that copiously, in proportion to her age, size, condition, and the state of excitement she is in; that he should give her a dose of physic immediately after the bleeding; after the physic begins to operate, he should administer half a drachm of opium and half an ounce of sweet spirit of nitre. Give the cow gruel, and keep her as quiet as possible. By these means, the irritation may be allayed and the cow may go her full time. But if the discharge is fœtid, " the natural conclusion will be, that the fœtus is dead, and must be got rid of as speedily as possible. Bleeding may even then be requisite, if much fever exists. In other respects, the animal must be treated as if her usual time of pregnancy had been accomplished." He further directs as a means of *preventing* the formation of this habit among cows, that as soon as the fœtus can be got rid of, it should be immediately buried deep, and far from the cow-pasture. A cow that has repeatedly aborted, should be fatted and slaughtered.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Short Seasonable Hints.

TENDER SHRUBS, *grapes, strawberries, &c.*, covered late last autumn from frost, should be uncovered early, before injury may have taken place by close packing and confinement, which is always greater after a winter's settling.

Small banks or mounds of earth, which may have been thrown around trees to protect them from mice, should be levelled down at an early period.

ORCHARD CATERPILLARS should be thoroughly cleared from the trees before or at the time of hatching. A little practice quickly enables any one to perceive the little knobs of eggs near the ends of the twigs, to cut them off and burn them. Every one of these little knobs is an embryo nest of caterpillars. They hatch simultaneously with the opening of the buds; and if not before removed, the white spiderweb down which the young worms thickly wind about their nest, even in the short space of a day or two, greatly facilitates their ready detection. It may be very readily comprehended how much easier it is to rid a branch of a nest when only the hundredth of an ounce in weight, than after the size has increased to two or three pounds.

RASPBERRIES need early pruning. Clear away the old stems, and leave only half a dozen of the strongest of the new. Their upper extremities are to be shortened a foot or two, and the remaining stems, if not of a stiff and upright variety, to be tied to a stake.

TREES IN BUD, or which were budded last summer, should be headed down, leaving the inserted bud alone to grow. But if cut too closely, the stump of the stock will become partially dry down below the place of the bud, and endanger its growth; hence two or three inches must be left until some inches of growth are made, and to this stump the young shoot is tied to straighten the tree. The stump may be cut closely about mid-summer or sooner.

Young trees, lacking vigor of growth, may be manured by spreading compost or yard manure over the surface for some feet from the tree, and spading it in. For the peach, pear, and apple, the application of ashes, (if leached, they are highly valuable,) and lime, is usually found of eminent service.

Preparing for transplanting, should be done in the most thorough manner. Large holes, six or seven feet in diameter, and a foot and a-half deep, filled with rich mould, will be found cheaper for most kinds, than holes just large enough to crowd the roots in with some difficulty. A still better way is, to subsoil and trench-plow for one year previously, either the whole surface, or a strip ten feet wide where the row of trees is to stand, thoroughly mixing in manure, muck, and ashes, in compost, by the process of plowing and tillage. Now, does any one start up in alarm, at the cost of this preparation? As well might he become frightened at the expense of setting out his trees at all,—and indeed with a great deal more propriety, at the hasty and superficial style; for fifty apple trees, thoroughly set out at a cost equal to the price of fifty more, will yield in ten years, more than twice the amount of fruit to be obtained from the full hundred without care or preparation, to say nothing of the superior quality.

Pruning connected with Transplanting.

Every cultivator must have noticed the great difference between the vigor of growth, and the power of producing new shoots, possessed by those more southern species, the peach and the grape, than those of more northern origin, as the apple and cherry. Hence the greater necessity of pruning the peach and grape, to improve the quality of the crop, and prevent a redundancy of wood and leaves.

This reproducing power enables the cultivator to secure an important advantage in transplanting. The shoots of a grape-vine, when set out, may be cut back to two or three buds, and it will quickly throw out a new growth. The peach will do the same. It hence becomes far safer in removal to lessen the number of buds, until a corresponding growth of the root will support a heavy amount of foliage. This also explains the reason why peach trees may be set out *in the bud*, (that is, before the inserted bud has started,) with such great safety, and without diminishing the growth for the first, nor any subsequent year.

So important is the shortening back of the shoots of young peach trees when transplanted, so as to reduce to a-half or a-quarter, the number of buds, that we have had as good success in setting out trees three or four years from the bud, with this shortening, as in others only one year old, without it.

The Peach Crop.

Through a large portion of Western New-York, most of the peach crop has been destroyed by the severe cold of the late winter, the thermometer having sunk several degrees below zero. In favorable localities, a part of the fruit buds have escaped. Where the thermometer sunk to 10° or 12° below zero, nearly the whole have suffered. The fruit buds are capable of enduring a much lower degree of cold, if they have not been in the least degree swollen by previous warm weather; but it usually happens that a few mild days late in autumn or during winter, throw into them moisture enough to render them liable to destruction. The remarkably mild weather, at the commencement of the past winter, will be recollected by all, and it was observed with apprehension by those who knew the dangerous position in which it was placing the peach crop.

Large and Small Fruit.

The value which is placed on large size alone, has contributed in a great degree, to introduce poor fruits into cultivation. Where would have been the Monstrous Pippin or the Gloria Mundi (glory of the world) if it had been no larger than the Ross Nonpareil or Bullock's Pippin? Such "heavy orbs" as the Alexander, the Twenty Ounce, and Pound Sweeting, although not to be compared in quality to many others, have been suffered to eclipse them, until cultivators had their sight thoroughly satiated by gazing at the monsters, and the palate remained yet to be consulted.

There is less excuse for retaining such large sorts, because beyond a certain size for an apple, weight becomes an evil, by adding to the liability to bruise. For this reason, it is not desirable to have larger than the Gravenstein, Swaar, and Esopus Spitzenburgh, when well grown. Much smaller sorts, on the other hand, although they may be of high flavor, are less convenient in gathering, and have hardly space enough for a good mass of pulp between the skin and the core. Hence the value of Bullock's Pippin, and English Golden Pippin become greatly diminished; and even the Pomme Grise and English Russet, are less prized for falling a little below the standard of magnitude. Early apples, softer and more easily bruised, may be less in size than keepers; for which reason, the small figure of the Early Joe and Garden Royal should not be regarded as so serious an objection as with winter fruit.

With small fruits, as the cherry and strawberry, it is more important to secure large size. If it requires as much time to pick a peck of one of these, as a cartload of apples and peaches, doubling the bulk becomes a point of great convenience.

We have often thought that a classification of a few prominent varieties, according to their leading qualities of recommendation, would be interesting as well as useful:—

Fruits remarkable CHIEFLY *for large size*:—Monstrous Pippin, Pound Sweeting, Alexander and Kentish Filbasket apples; Belle et Bonne, Colmar d'Aremberg, Dunmore, and Cumberland pears; the Yellow Egg, Diamond, and Duane's Purple plums; and Methven and Wilmot's Superb strawberries.

For remarkable beauty alone:—Cranberry Pippin and Beauty of Kent apples; and Belle de Bruxelles, Columbia, Summer Belle, Jalousie and Forelle pears.

For fine flavor, but deficient in size:—Early Joe, Ross Nonpareil, Bullock's Pippin, (when well ripened,) Garden Royal, Golden Pippin, and Sam Young apples; Seckel, Eyewood, and Rostiezer pears; Green Gage and Frost Gage plums; and Duke of Kent strawberry.

Fruits of good quality, whose reputation has been assisted by fine or handsome appearance:—Dutch Mignonne, Red Astrachan, Williams' Favorite, Maiden's Blush, St. Lawrence, and Lady apples; Golden Bilboa, Bartlett, and Vicar of Winkfield pears; Cooledge's Favorite and Crawford's Early peaches; Washington and Cruger's Scarlet plums; Napoleon Bigarreau and Graffion cherries; and Hovey's Seedling strawberry.

Cherries arranged in order of their SIZE:—Napoleon Bigarreau, Black Tartarian (when not overloaded,) Graffion or Biggareau, Large White Bigarreau, Holland Bigarreau, Knight's Early Black and Belle Magnifique, Large English Morello, Black Eagle, Carnation, Florence, Elkhorn, Early Purple, Guigne and American Heart, Sparhawk's Honey, Gridley and Belle de Choisey, Downer and Madison Bigarreau, and May Bigarreau.

Pruning Young Apples—the Baldwin Apple.

Eds. Cultivator—Mr. Downing seems to think that our powerful sun reaches every part of the tree, and renders the minute system of pruning and training, which occupy so large a portion of the English works on this subject, of little or no moment to the cultivator here. I have been engaged in raising engrafted fruit about twenty years, and my impression is, that strict and minute attention should be given in the formation of the young apple tree. I have found that where the tree was suffered to take its own course, that in a great many instances, when it comes to bearing, the tree will be badly balanced, and some limbs having a greater amount of fruit than others, come in contact. When this is the case, the fruit on the younger limbs will not mature well. The best method of forming a tree that has ever been suggested to my mind, is at about seven feet from the ground, to trim all the limbs off but four, and them to be left in opposite directions—say to correspond with the different points of the compass. Passing up the main shaft of the young tree, about four ft. above the first tier of limbs, you should then leave four more young limbs, immediately over the spaces of the under tier of limbs. You can extend the same course as much higher as may be thought expedient. A tree pruned in the above described way, let it be ever so heavily laden with fruit, will not break in any part; besides, if one limb has more fruit on it than the others, when bowed down, it will not come in contact with limbs on the lower tier, because there is none immediately under it. When a tree is formed as above described, the fruit throughout the whole tree will be of an uniform size, and will mature better than when managed in any other way.

It is supposed by some that the Baldwin apple does not do as well south of New England, as it does there. I have had trees of that description in bearing for about fifteen years, in the vicinity of Wheeling, Va., which is in latitude 40° 10′. The Baldwin apple in New England I only know by reputation; therefore do not know how it ripens and keeps, when compared with other keeping fruit. My Baldwin apples are fit for barreling from ten to fourteen days sooner than any of my other fruit, and I have a goodly variety. If they are picked and barreled with care, and laid in some cool place, they will keep tolerably well until the last of February. They are very palatable and even delicious, and particularly so when we speak of them as a cooking apple. N. P. A. *Etna, O.*, 1849.

Raising Peach Trees.

Eds. Cultivator—I have been very successful in raising peach trees in a nursery, and the following has been the method practiced: I always procure pits of the common late variety, and none others, which are kept dry until about the first of March, when they are then soaked in barrels of water until the seeds are perfectly swelled with the moisture. The pits are then placed in layers on the surface of the ground, and covered with soil, where they are exposed to the frost until about the first of April, when they are taken out and carefully cracked by hand, and as fast as the seeds are taken out, they are thrown into a dish of water, which breaks the fall and prevents injury to the germ. The seeds should not remain too long in the water, as they are liable to be injured by an excess. The next process is to put them in a situation to germinate; and I have found a preparation of leaf mould and fine yellow loam sifted, much the best for the purpose; as the seeds are not liable to be injured in their removal, after they are sprouted, the preparation should be placed in a situation where the sun shines most during the day, with the peach seeds mixed through it. The dark color of the leaf mould attracts the heat of the sun, and soon causes the seeds to germinate. The next process is the planting, which is a very important part.[*] After the ground is plowed and leveled, a line is stretched where the first row is intended to be planted. The line is spaced off at six to eight inches, and permanently marked, and a seed is to be planted opposite to each mark which makes great regularity in the growth of the trees, all having an equal chance. In putting the seeds in the ground, I use a common transplanting trowel to dig the hole for the seed, which is made about one inch deep. The root and seed is placed carefully on the side, and covered with moist and mellow soil. If the earth is very dry, it should be watered over each seed, to insure complete success. If any fail to grow, they can be made good by setting in plants of peach trees 2 or 3 inches high. The latter operation should not be put off too long, as peach trees will not grow well if transplanted after the roots turn red. After the trees are about three inches high, they should have the ground well loosened around them, and the surface between the rows well stirred with the cultivator. The trees need be hoed but twice during the first season. I always make it a practice to use the cultivator after every rain which occurs during the growing season. while the trees remain in the nursery. The rows should be made three and a-half feet distant from each other.

There is one other notion connected with the operation of growing peach trees. If seeds of the top onion are planted in the space between the trees, a crop of excellent onions may be grown, without being at all detrimental to the growth of the trees, and the quantity will at least pay one-half the expense of raising the nursery. The onions which I have raised in this manner, were of fair size, and the fact of their being shaded by the trees during the hot weather, prevented their becoming so outrageous strong as they generally are, when exposed to the full heat of the sun during the summer. The great *ultima thule* of growing peach trees, whether in the nursery or orchard, consists in stirring the ground often, especially after every rain which falls through the growing season; and this fact should be impressed upon the mind of every person who expects to realise his wishes in this matter. A regular system of operation should be adopted, and carried out; and is actually of as much or more importance than is necessary to their growth and welfare, (i. e.) the warmth of the sun, vegetable matter, air, &c. I have often noticed the sad effects of plowing or summer fallowing ground occupied by peach trees. Such an operation is almost sure destruction to them, from the fact of the fibrous roots being destroyed at a time when they are of the greatest importance for the nourishment of the tree; (the same will apply to the apple orchard.) My young peach trees are always fit to bud in August; and if it is done early, an opportunity is afforded to rebud any trees where the bud fails in the first trial. I cut or head down my inoculated trees about the last of March, and if I find any trees whose buds failed to grow, I immediately dig them out and throw them away, as of no importance, for I consider it better to raise anew, than to bother with old, as they obstruct the free growth of buds around them, being of better constitution than most of the improved kinds. Isaac Hildreth. *Yates Co., N. Y.*

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[*] When the seeds are taken out for final planting after being sprouted, they should be covered with a wet cloth to prevent the gum from drying in the sun or wind.

Pruning Young Pear Trees

I have a number of pear trees from grafts inserted last spring, which have made from 3 to 4½ ft. of wood the past season; consequently they are so slender they will not support themselves without staking. Should they be headed back in the spring, so as to ensure a more stocky growth, or shall I continue to stake them until the trees are sufficient to support themselves? The trees are of the Beurre Bosc variety. W. Doolittle. *Borodino, Onondaga Co., N. Y.*

It would doubtless be best to stake the trees in the first place. Cutting them back half way down, would make crooked stems, and cutting down wholly, would only cause a repetition of the same difficulty another season. If they throw out side shoots, nip off the ends after they have grown some inches. This course will soon render the tree stiff. But in any case, the tree will become better able to support itself as it grows older, provided the stem is not kept closely trimmed up, which enlarges the top faster than the tree has strength to support it, the result of a very common error of the inexperienced. It is better to lessen the top, and suffer side shoots to remain one year, which will give the stem a gradual taper upwards, so essential to strength, instead of the long and uniformly slender form from repeated close trimming.

To Prevent the Ravages of the Cut Worm.

Eds. Cultivator—Most gardeners have experienced a great deal of vexation from the destruction of their plants by the cut worm. The cabbage plant appears to be in special favor with these destructives. They are much more abundant I think in southern gardens than at the north, and in many gardens, the plat devoted to cabbages has to be often almost entirely replanted. There is a simple and *efficient preventive* which requires only to be known to be universally practiced when necessary.

On the site of your intended row of plants dig a narrow trench three or four inches deep, and in the bottom of this trench set your plants as usual, and the cut worm will not go into the trench to injure the plants. The experiment was fully tested the past summer by the writer, and proved perfectly satisfactory. When the plants have become a little stout and able to resist the enemy, the earth must be gradually gathered about them until the whole plat once more becomes a level. The plants will head with this mode of culture quite as well as by any other. I have left about half of the plat at times, to be set in the old mode, and from one-fourth to two-thirds of the plants have been destroyed, while not one in the trenches has been injured in the least. I had but little faith in the plan when first pointed out to me, but repeated experiments have satisfied me that it is an efficient one. I don't pretend to give the reason of the thing, though I am convinced of its efficacy. Wm. N. White. *Athens, Geo.*

Destruction of Fruit Buds by Frost.

The buds of the Peach and other tender fruit trees throughout this section of country, were all destroyed by the cold weather of the winter of 1847—8, so that in this section of country there was hardly a peach to be seen. I have about thirty thrifty trees of the above variety, from three to six years old, and last fall I did not have a single peach. On examination, I find there is a clean sweep made of them this winter also, as I cannot discover a living bud on any of them. The Nectarine and Apricot have suffered a similar fate. The degree of cold has been from 10° to 14° below zero, and it ranged at that for several days in January. There is one circumstance that I cannot account for, and that is this: Our village is situated at the foot of the Shawangunk mountain, on the east, and it is thought not to be so cold in winter on the flat as on the mountain, by two or three degrees. I was presented the other day a branch of a peach tree, by J. Bennett, Esq. which he cut from one of his trees, with the buds all alive, and in a healthy condition, and he informed me they were not injured on the mountain; and where he lives is not more than a mile from our village.

Query—Why are they not killed on the mountain as well as on the flat? R. H. Drake. *Bloomingsburgh. Sullivan Co., N. Y.*

It is not very unusual for fruit buds to be killed by frost in valleys, when they escape on hills; and the reason is, that the degree of cold is greater in valleys at such times. It has been repeatedly proved that the mercury will sink several degrees lower on the banks of rivers, in still, cold mornings, than on points elevated 200 or 300 feet higher. The gravity of the air is in the ratio of its coldness, and consequently falls into the lowest places, when not disturbed by wind. Eds.

Seedlings vs. Suckers.

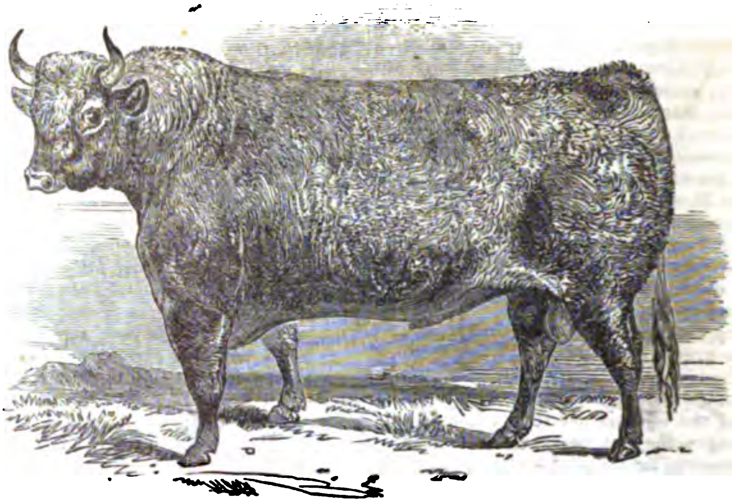
Eds. Cultivator—Notwithstanding all that has been written and published in our various Horticultural Journals respecting the merits and demerits of seedlings and suckers, as stocks for the production of fruit trees. I am of the opinion that the true cause of the inferiority of the latter for this purpose, has never yet been fully brought to view. Mr. Downing, than whom there is perhaps no higher horticultural authority in our country, says it is because " Suckers are always more liable to produce suckers." With all due deference to such distinguished testimony, if I may be permitted to speak from experience, (and it is by experience alone that the question can be determined,) I would say that the seedling is just as liable to produce sprouts as the suckers.

During the past year, I have trimmed with my own hands, preparatory to transplanting in the nursery, at least 50,000 seedlings, and I found invariably on the different varieties, many plants with from one to six suckers; and let any nurseryman try the experiment by trimming and shortening the tap root of any quantity of seedlings, and heel them in during the fall, letting them remain in the ground until the buds begin to expand pretty freely in the spring, and he will find sprouts or suckers enough to satisfy him of the truth of my assertion.

But the true cause of the inferiority of suckers for stocks, I conceive to arise from the fact, that they have been accustomed to derive their chief support from the parent tree, through the medium of the large tap-root which adheres to it, as the small rootlets thrown out are generally too feeble to extract much nourishment from the soil. When this large tap root is broken for the purpose of transplanting, and the sucker loses the support of the parent tree, it often exhibits a sickly life, and frequently dies of sheer starvation. The difference therefore in profit to the nurserymen, to say nothing respecting the interest of the purchaser, I regard as equal to two hundred per cent. in favor of seedlings. So thoroughly satisfied do I feel on this point, that I have long since determined to grow seedlings in sufficient quantities to supply myself with them exclusively, and thus avoid entirely the use of suckers.

Peach seedlings which are still used in some places quite extensively, as stocks for the plum, are still worse, and the public generally, I think, ought to be cautioned against them. Charles Hamilton. *Canterbury, Orange Co., N. Y.*

Be not in haste to turn cattle to pasture. It is best to keep them at the barn till there is a good *bite* of grass. Sheep may be turned out, on dry land, this month.



45—DEVON BULL.

Different Varieties of the Ox.

The Middle-Horns.

It is easy to trace our own breeds of cattle to the stocks of Europe. With the exception of those of South America, which sprung from animals taken from Spain, (see current vol. page 59,) they have been derived almost entirely from England. But our ideas of the origin of British cattle, must be in a degree conjectural. The progenitors of several of the present breeds were found in the possession of the ancient inhabitants of Britain, at the time of its invasion and conquest by Cæsar, fifty years before the Christian era. At what period, or in what manner those people, or their animals reached that country, cannot be told; they are events so remote that neither history nor tradition afford any light in regard to them.

In our remarks on the ancient Roman ox, (Feb. No. page 59,) we have alluded to the hypothesis that this primitive race formerly extended itself over a large portion of Europe, and that it may have been the origin of some of the British breeds. In the characteristics of these cattle, so far as we can judge, there is nothing which conflicts with this idea.

But whatever may have been the origin of the cattle of the British islands, it may be said that from the earliest times, two or three distinct tribes and stocks have existed there: viz. 1, the Long-horns, which originally occupied the low flat lands of England, and similar parts of Ireland, and were remarkable for the enormous length of their horns, their bulky frames and thick hides. 2, the Middle-horns, represented by the cattle of Devonshire, Herefordshire, Wales, and the Scottish Highlands; of which the semi-wild cattle of Chillingham Park, Northumberland, may be taken as the type. 3, in addition to these may be mentioned the Polled or hornless cattle, represented by the Galloway and other breeds without horns, which may have been derived from the semi-wild stock of Chatelherault Park, Lanarkshire, Scotland. Martin observes that these three breeds "are of untraceable antiquity in our islands [Great Britain and Ireland,] so that we may call them *original*, without entering into the question as to their primæval source."

In regard to the two wild stocks mentioned, and the relation they bear to the domestic British breeds, there has been considerable speculation. Some have supposed that they were originally wild, have never been domesticated, but that the domestic breeds of which they are considered the type, have been derived from them. The conclusion, however, which has latterly been more generally adopted, is, that these cattle are descended from a domestic stock, which in early times were allowed to roam in a great degree unrestrained, and finally became emancipated from the control of man.

It is admitted that there is a great similarity between these wild stocks and some of the tame breeds. All the middle-horns, especially the Devon and West-Highland breeds, show an evident affinity with the Chillingham stock; while the Galloways are evidently closely allied to the Chatelherault cattle. The latter are larger and more robust than the Chillingham, and are mostly without horns; which, with their likeness to the Galloways in shape, gives support to the idea that they had a common origin. But we shall recur to this, in noticing the Galloways.

The middle-horns are found in Devonshire and the western counties of England, in Wales, Scotland, and parts of Ireland. They are believed to have constituted the stock of the ancient Celtic inhabitants of those districts; while the long-horns, another original stock, probably occupied the low, flat lands of both islands. As to the short-horns, we shall show, in the proper place, that they are not of British origin.

Circumstances connected with the history of Britain, have tended to preserve the middle-horned breeds of cattle in great purity. The country in early times was often subjected to the inroads of invading enemies. The property of the natives, in those days, consisted principally of their cattle; and as the encroachments of the conquerors forced them to retire to the mountain fastnesses, they naturally took with them their animals, on which their subsistence in a great degree depended. In these inaccessible regions, the people remained with their herds, in comparative security and independence. "They were proud of their country, and proud of their cattle, their choicest possession." "It thence resulted," says Youatt, "that in Devon, in Sussex, in Wales, and in Scotland, the cattle have been the same from time immemorial."

That the middle-horns have all descended from a common stock, is evident from their general characters. "The slightest observation," observes Youatt, "will convince us that the cattle in Devonshire, Sussex, Wales, and Scotland, are essentially the same. They

46—WEST-HIGHLAND OX.

are middle-horned; tolerable, but not extraordinary milkers, and remarkable for the quality rather than the quantity of their milk; active at work; and with an unequalled aptitude to fatten. They have all the characters of the same breed, changed by soil and climate and time, yet little changed by the intermeddling of man. We may almost trace the color, namely, the red of the Devon, the Sussex, and the Hereford; and even where the black alone are now found, the memory of the red prevails; it has a kind of superstitious reverence attached to it in the legends of the country; and in almost every part of Scotland, and in some of the mountains of Wales, the milk of the *red cow* is considered to be a remedy for every disease, and a preservative from every evil. Every one who has had the opportunities of comparing the Devon cattle with the wild breed of Chillingham castle, has been struck with the great resemblance in many points, notwithstanding the difference of color."

THE DEVON BREED.—Of this breed there are two varieties, commonly known as the North and South Devons. The former are the finest in form, and are held in the highest estimation for fattening and for labor; the latter are thought best for the dairy. The characteristics of the North Devon bull (fig. 45) may be given as follows: The head small; the muzzle fine; the nostrils wide; the horns tapering, and of a waxy yellow; the eye large and clear; the neck round and arched above, with little dewlap; the chest broad and deep; the breast prominent; the limbs fine-boned; the fore-arm muscular; the hips high, and the hind quarters well filled up; the tail long, slender, and set high.

The ox is taller and more delicately formed than the bull. He has fine withers, a slanting shoulder and prominent brisket; the legs are rather long, but fine-boned, strong and muscular; the neck is light, and rather long; the head small and the muzzle fine; the horns longer, more slender and tapering than in the bull. The whole form and appearance indicates sprightliness and activity. The skin is of moderate thickness, mellow, and in the best animals, covered with soft, curling hair. Those with straight hair are not so highly prized. Youatt says—" Good judges of these cattle speak of these curls as running like little ripples of wind on a pond of water. *** Those with curled hair are somewhat more hardy and fatten more kindly." The color is red, or bay. The best-bred families have a dun-colored ring around the eye and muzzle When well fattened, the oxen sometimes weigh 1400 pounds or more, the four quarters. The ordinary weight at four to five years old, is from 800 to 900 pounds.

The cow is much smaller than the bull, and the bull is considerably less than the ox. She has a beautiful head, and, like the ox, a countenance denoting great intelligence. For the dairy, the Devon cow holds a moderate rank. Her milk is of remarkable richness, eight quarts producing, on an average, a pound of butter, and the butter is noted for its richness and fine flavor. Some breeders have lately paid more attention to the dairy qualities in this breed, than formerly, and Mr. Bloomfield, of the county of Norfolk, England, obtained a prize a few years since, for having produced an average yield of over 200 pounds per cow, in a dairy of twenty cows.

Some of the finest North Devon cattle have been imported to this country, and there are now, in different sections, several established breeders of this stock. Among these, may be named GEORGE PATTERSON, of Baltimore, LEMUEL HURLBUT, of Winchester, Ct., and H. N. WASHBON, of Butternuts, N. Y. The Massachusetts Society for Promoting Agriculture, have imported some very fine animals of this breed, from which there have been bred others of good quality.

The breed has succeeded well here, and has proved better adapted to our hilly and unfertile sections, than larger breeds. They are hardy, generally healthy, thrifty and active. The best families are fine beef cattle, laying their flesh on the valuable parts, and giving that which is of fine grain and well marbled. It should be remarked, however, that proper attention has not always been paid by breeders to what is technically called *quality*—that is, a tendency to fatten, and to make the right kind of beef. Hard-fleshed, *lyery* animals have been allowed to propagate, and have sometimes been taken for just specimens of the breed. The reputation of the Devons has suffered, somewhat, in consequence of such false notions and bad breeding. But the error is now in a fair way to be corrected; people are beginning to have a better idea of the proper points and characteristics of cattle.

The Devons are good working cattle. The oxen are active and good travellers. For the plow, on light soils, they are unrivalled. They have long been celebrated in England for this purpose. Youatt says—" Four good Devonshire steers will do as much work in the field, or on the road, as any three horses; and in as quick and often quicker time. The only objection to the breed for the yoke, in this country, is that it is not easy to obtain oxen of sufficient size for the performance of the heaviest labor. We think this objection may be obviated in a great degree, by proper attention in breeding.

An idea has prevailed to a considerable extent, that the common cattle of New England, often called "natives," were originally North Devons. We are able to trace, comparatively, but little resemblance between them. Our "pilgrim fathers" probably introduced cattle of several breeds—though there may have been no special design of this kind. They sailed from Plymouth, a port in the south part of Devonshire. Their cattle were probably collected in the neighborhood, or as convenience favored. According to the early records of the colony, the first brought over comprised animals of various colors—red, black, and "white-backed." We have now before us an extract from an ancient document, giving an account of the division by lot, of the first cattle imported by the colonists of Plymouth, Massachusetts. The animals are not particularly described, but the colors are in several instances mentioned, and they are referred to as having been brought over in "*the Jacob*," and in "*the Ann*,"—names of vessels. "*Four black heyfers that came in the Jacob*," are spoken of as having been put into different "lots," in apportioning the stock among the people.

A person familiar with the New England cattle, especially as they were found thirty years since, when they had been little changed by modern importations—will recollect how frequently those of a brown or black color were met with; and one might almost fancy he could trace the blood of those "four black heyfers" in some of the short-legged, hardy oxen of the granite hills. The color and points of these cattle answer to the description of those of Cornwall, a county forming the south-west peninsula of England, and adjoining Devon on the west. The Cornish cattle are said to resemble those of Wales and the Highlands of Scotland.

But most of the New England cattle have been red. This has generally been the color of the larger animals. For the most part, they correspond to the characters of the South Devons, a variety differing considerably from the North Devons, being larger boned and coarser, with black noses. It is proper to remark, however, that strong indications of Sussex blood, are shown by some of the best of our "native" oxen and cows.

THE WEST HIGHLAND BREED.—The West-Highland or *Kyloe* breed of cattle (fig. 46) is found on the western coast of Scotland, and on the Hebridian islands. The county of Argyle, and the islands of Islay and Skye, are said to furnish the best. No breed can have stronger claims to the title of *aboriginal* than this. It is thus noticed by Martin: "It may be observed that, from the most remote times, this land of heath and mountain, [Scotland,] has been the nursery of an original breed or race of black cattle, of wild aspect, of beautiful symmetry, and though small, yet vigorous and hardy; patient of hunger and cold, and rapidly fattening on tolerable land. *** If we may venture an opinion, they display more nearly than any other breed, the characters of the mountain cattle of our island, when invaded by Cæsar." Like their congeners, the Devons, they bear a close resemblance to the wild stock of Chillingham park. Martin says, "Change the color from black to white, and there is little difference between a beautiful Kyloe from Arran, Islay, or the Isle of Skye, and one of the wild cattle of Chillingham."

These cattle possess uncommon hardiness of constitution. The territory of Scotland lies mostly between 55 and 58 deg. of latitude, yet the Kyloes subsist summer and winter, on their native mountain ranges, without shelter, and generally without other food than what is afforded by the pastures of those wild regions. In winter they brouse on the heather, or crop the scanty grass, which they are often obliged to obtain beneath a covering of snow. Thus they live and thrive, where most other cattle would utterly starve. Such is their tendency to fatten, that when removed to favorable situations, they will, with good feeding, frequently gain a fourth to a third of their weight in six months. Their proportion of offal is not greater than in the most improved larger breeds; they lay their flesh and fat equally in the best parts; and when fat, the beef is fine in the grain, highly flavored, well marbled, and commands the highest price in every market. The nett weight of the grass-fed oxen, at four to five years old, is put down at 500 to 800 pounds, the four quarters—though it is not unusual for those which are well fatted, to weigh upwards of 1,000 pounds.

The points of the West-Highlanders are given by Martin as follows:—"In a well-bred Kyloe, the following characters are conspicuous: The head is small and short, with a fine and somewhat upturned muzzle; the forehead is broad; the horns wide apart at their base, tapering, and of a waxen yellow; the neck is fine at its junction with the head, arched above, and abrubtly descending to the breast, which is broad, full and very prominent; the shoulders are deep and broad, and the chine is well filled, so as to leave no depression behind them; the limbs are short and muscular, with moderate bone; the back is straight and broad; the ribs boldly arched and brought well up to the hips; the chest deep and voluminous; the tail high set and largely tufted at the tip; the coat of hair thick and black: such is the bull. The ox differs in proportion. The cow is far more slightly built, and her general contour is more elongated. Although, as we have said, black is the ordinary or standard color of the kyloe, many are of a reddish brown, and some are of a pale or whitish dun."

The milk of the West-Highlanders, though not afforded in great abundance, is of extraordinary richness, and the butter made from it is highly esteemed for its superior flavor. There is good reason to believe that the oxen would prove equal to any breed for labor. Sir John Sinclair states that he tried various breeds for this purpose, and that from Argyle he "got as quick, honest and hardy workers, and profitable fatteners as could reasonably be desired." Their form is indicative of great strength and energy.

We have on former occasions, suggested the advantage which would result to many sections of this country from the introduction of the West-Highland cattle. It seems to us that these and the Galloways, would be better adapted to our northern districts, and mountain ranges, than any other breeds.

The figure herewith given, is that of a West-Highland ox, five years old, exhibited by His Royal Highness Prince Albert, at the Smithfield Show of fat cattle, 1847, and which received the first prize in the class of extra stock.

WEEKLY AGRICULTURAL MEETINGS AT BOSTON.—These meetings are held at the State House every Tuesday evening during the session of the Legislature. The organization for the present year is as follows: Hon. M. P. WILDER, President; Lieut. Gov. REED. Hon. CORNWELL LEONARD, Vice-Presidents; WM. BUCKMINSTER, S. W. COLE, LEVI BARTLETT, Secretaries. This, we believe, is the tenth winter during which these meetings have been held, and it is stated that more interest has been manifested in them during the present session than ever before. We shall probably give some account of its discussions hereafter.

The Farmer's Note-Book.

The Manufacture of Maple Sugar.

EDS. CULTIVATOR—As maple sugar is becoming an important article in the product of our farms, it is important that every farmer, having a sugar-orchard, should know how to make such sugar as will command the highest price in the market, and also be the best to use at home.

Some of the sugar, made for exhibition at our fairs, though very *white* and *nice* to look at, is not very *sweet*; it has been not only drained, but bleached, by having water passed through it—a process which takes out not only the sweetness, but a large share of that peculiar *maple flavor*, which constitutes its excellence. If sugar is black and dirty, it may be improved by draining, but if rightly made, there will be no dirt in it, and very little color, so that it will need no draining.

To make good sugar, the manufacturer must take for his motto—*cleanliness*—and stick to it from first to last. The buckets, store tubs, and every thing the sap or sirup passes through, should be perfectly *clean* and *sweet*, so that the sap or sirup, when put into the pans for boiling, may be as clean as milk for the cheese-tub, or cream for the churn.

In tapping trees a ½ or ⅝ inch bit is preferable to a larger one; a small wound being much the least injurious to the tree. Nails for hanging up buckets, are generally made much too large and too long. The best that I have used, are made of wire, of suitable size, cut off about 1½ inch long, then drawn out a little at one end, and headed at the other. The sap is most easily carried to the sugar-house in spouts, where the sugar-orchard is so situated that it can be done; but when a team is used, the sap is gathered most conveniently, in tubs made largest at the bottom, the upper head being three or four inches from the end of the staves, and having a hole sawed in it, large enough to admit a pail for pouring in the sap; over this should be fastened a cloth strainer, to separate the leaves and pieces of bark that may have blown into the sap.

Sheet-iron pans are generally used for boiling, and where the saving of fuel is an object, two may be heated by the same fire—a large one in front, and a smaller one between that and the chimney. The old method of boiling in kettles, as still practiced by some farmers, is hard business; requiring much more time and fuel, besides making sugar of an inferior quality.

When the sap is boiled to a sirup, it should be strained through a woolen strainer, and left to settle one or two days. It should then be poured back into the pan, (leaving the settlings, if any there are) and sugared off. If the sap has been kept clear and free from rain-water, the sirup will be as clear as honey, and will need no cleansing; but if by any means, the sirup has got much dirt or color in it, it should be cleansed. If after cleansing there remains any of the curd or other impurities, the sirup should again be strained through a flannel strainer, always giving it time to run through without squeezing, but as there is considerable work in cleansing, besides a shrinkage in the sirup, it will be found much cheaper *to keep the dirt out* than to *cleanse* it out. The nicest sugar I have ever seen, was boiled in bright tin pans, from the sap directly to sugar.

As sugar sells best in small cakes, of from 2 to 8 oz. weight, it should be run in moulds of this size. Moulds of tin and wood are used, but wood is much the cheapest and most convenient. They are easily made by nailing strips of wood, at equal distances, upon a board made perfectly smooth and level—the strips to be a little the thickest at the bottom, that the sugar may easily be taken out. Cross strips are put in, by sawing spaces in the ones already nailed down, which last strips will of course need no fastening, being taken out with the sugar. The cakes may be of any size, according to the thickness of the strips and their distance from each other. When the sugar is done, the pan is taken off and the sugar stirred until it begins to grain—then dipped upon the moulds, and the top levelled by passing over it a straight piece of board, as fast as the sugar is poured on. Nice sugar, made in this manner, will always sell well, without reference to the price of common sugars, being sold as an article of luxury.

For home consumption, many think stirred sugar altogether the best, and most convenient. To make this the sugar is done about the same as to cake, then taken out and stirred rapidly till dry—afterward occasionally stirring it to keep it light. Though stirred sugar may not be quite so white as that not done as much and then drained, yet, when the trouble of draining, the loss of sweetness and flavor is considered, we think the stirred sugar altogether preferable to use in cooking.

It is a common, but mistaken opinion, that good sugar cannot be made the last of the season. Two years ago, when the sugaring was about over, and the buckets sour, I brought them to the sugar-house and scalded them over, after which there was a run of sap, which was made into stirred sugar, which drew a premium at our next fair. As I took no extra pains, it was not so white and nice as some lots of drained sugar, which were equal in appearance to the best double-refined loaf; yet, it was so nearly white, that those unacquainted with the manufacture of maple sugar, could hardly be convinced it was not drained. Though the last runs may not generally make so good sugar as the first, yet there can be no doubt *sour buckets* are more at fault than the lateness of the season, or the swelling of the buds.

Those who make maple sugar, know there is *hard work* in it, and though there may be *extra* labor in making *nice sugar*, yet when we consider that one pound of first-rate sugar, is worth more than two of the black stuff that sometimes passes, or is offered for sugar, it is easy to see, that those who make the best article, receive the best reward for their labor. JOHN TUFTS.
Wardsboro,' Windham Co., Vt., March, 1849.

National Meteorological Observations.

EDS. CULTIVATOR—We have noticed with much pleasure, a circular issued by Profs. Henry, of the Smithsonian Institute, and Espy, of the navy, on the subject of observations on the meteorology of our country, especially with reference to American storms.

The movement is one which we may well suppose in the present age will not receive universal approbation. Yet, although many may decry and say it is of no importance, a mere throwing away of money, we conceive the project to be one of vast importance to advancement in science, and of a practical utility which can be appreciated only when much better understood, than it is at present.

There is probably no class that will receive greater benefit from these observations, if they are carefully noted, than the farmer, for who is affected by storms and frosts, and wind and change of temperature more than him? The tendency of meteorological observations, is to note these changes with atmospheric appearances preceding them, which, if his own observation would do, would undoubtedly enable him to avoid many an unforeseen catastrophe. They will also establish climatical differences more clearly than they have yet been done, and in this way render him much service.

We hope for the glory of the nation and the well being of all its subjects, this noble enterprise will be faithfully carried out, and am sure that every "native American," faithful and true to the interest of his country, will rejoice to see Congress make such appropriations as are necessary to consummate the object. W. Bacon. *Richmond, Mass., March,* 1849.

Manger Feeding.

Eds. Cultivator—That the common method of feeding horses by putting coarse hay in a rack before them, and giving them oats unmixed with other food, is not the best way, I am fully convinced. When hay is fed from a rack, there is usually much waste, as horses are apt to acquire a habit of selecting the best locks, and drawing the remainder down to be trodden on and mixed with their litter. When oats are fed in the common way, the horse swallows them so greedily that they are not half masticated, and consequently, a pretty large portion of them do not digest. Now both of these difficulties may be obviated, and a considerable saving effected by adopting a different management.

I will describe my method, and all who are pleased with it may do likewise. I prepared my manger for containing a quantity of cut feed sufficient to last a horse 12 hours, by making it 20 inches deep, and 18 inches wide at the top—each horse's portion being as long as the width of his stall. Narrow strips of board are firmly nailed across the top, 14 inches apart, to prevent the horse from tossing his feed out. I have a self-feeding machine for cutting hay and straw, with which one man can cut as much in half an hour, as three horses can consume in 24 hours. Each revolution of the wheel to which the knife is attached brings the straw or hay forward one inch, so that the whole is cut in pieces an inch in length. I feed oat straw and hay, in equal proportions, and keep the manger well supplied. Twice a day, (morning and evening) each horse is allowed three quarts of oats, put in his manger dry, and well mixed with his cut feed; I prefer mixing the oats with the other feed dry, because if wet some of it will become sour and unpalatable. Now the advantage of thus mixing the oats with the cut feed is obvious; for the horse cannot swallow the latter without first chewing it, and as he cannot separate the oats from it, he is obliged to chew them also, and consequently they all digest, and the whole of their nutriment is extracted.

Horses thus kept, and moderately worked, will be healthy, spirited and in good condition; old horses will do better on cut than on coarse feed, because less chewing is required; there is also an advantage gained by cutting the provender for horses that are kept much of the time in harness, as they will fill themselves quicker than with coarse feed, and therefore have much more time for rest. The only objections I am aware of to this system, are the cost of the machine and the labor of cutting; still I am well convinced that the saving of food is more than an equivalent for these. Some may be disposed to take advantage of this plan to induce horses to eat musty hay, or such as has been spoiled in curing; but every farmer ought to be aware that such hay is always injurious, and is very liable to produce an inflammation of the kidneys.

Many farmers in this neighborhood have the impression that rye straw contains more nourishment than oat straw. I know not the origin of this opinion; perhaps the inference is drawn from the fact that a certain quantity of rye is of more value than the same quantity of oats by measure. But horses and cattle always give the preference to oat straw; (and their judgment in this case, is of some consequence;) besides, the analysis of the two, shows that oat straw contains considerable more of the principal nutritive ingredient (nitrogen) than is contained in rye straw. It should however, be borne in mind, that any kind of straw is vastly inferior to hay in nutritive properties, and I would only recommend the use of the former for horses for the sake of economy, and when little labor is required.

Some prefer ground feed for graining; but if they will take the trouble to weigh their grists before sending them to mill, and again after their return, they will find the toll is an item worth considering. I doubt whether there is any kind of feed in which so many valuable properties are combined as in oats, and I would always give them the preference, except when their price in market is much higher, proportionally, than the other kinds of grain which may be substituted for feeding, as rye and corn. I can see little advantage, and no economy, in having oats ground, when we can feed them in such a way as to ensure thorough mastication. J. McKinstry. *Greenport, Columbia Co., N. Y. February,* 5, 1849.

Digging Gold at Home and Abroad.

There is danger that the drain to the gold regions will leave the country very bare of laboring hands. Many, very many, have gone to the *diggings* of California, as hired hands, or on shares out of their own work, who at home, "to dig were ashamed." Mere drones and loafers will not be missed; but clerks and young mechanics in the towns and cities have gone, whose places must be filled by others. Farmers' sons, in many instances, have gone, leaving the homesteads to be cultivated or not, as their fathers may find help. This state of things calls upon those who are left to be up and doing;—to lay their plans judiciously;—to use such labor-saving machinery as they find applicable. Let no one take more ground under cultivation than he can manage well and in good season. Let the manure be all well applied. It may be, that a fair application of mind and hands and means at home, may bring a harvest as profitable, all things considered, as the generality of gold seekers will reap. It will be attained with infinitely less anxiety and danger, in all cases; and be followed, in most cases, with less regret. D. M. *Allegany Co., Pa.*

Transplanting Forest Trees.

As the season of the year for the transplanting of forest trees is near at hand, the following remarks may be useful. They were written by Mr. Amos Hitchcock, of Pittsford, Vt., who obtained a premium from the Rutland County Ag. Society, for his success in transplanting forest trees. He describes his practice as follows: "About the first of May, or when the buds are considerably swollen, and spring so far advanced as not to freeze nights, we repair to second growth timber land, if we wish for maple or other forest trees. Provided with the necessary tools, we select our trees, avoiding crooked or ugly formed trunks, and commence the operation by digging a trench around the tree, eighteen or twenty inches from the tree, according to its size, and sufficiently deep to cut off all the large roots. The tree is then easily removed by the help of an iron bar, and a little hand lifting. Care is taken not to injure the small fibrous roots. After having dug in this manner, as many trees as we wish, they are conveyed on a box wagon to the place where they are to be planted. We now bring the trees to an equal length by removing all the top, say ten feet from the root. If there be small shoots below this point they are suffered to remain, otherwise the entire top is removed. The holes for receiving the trees having been dug at equal distances, and in a direct line, the roots are then wet that the earth may readily adhere to them, and the trees are planted to their original depth. Care should be taken to work the fine earth in among the roots, so that no vacuum be left directly under the trunk. The turf should be placed snugly around the tree with the grass side up, and the whole pressed down with the foot or some suitable instrument. In this way, two men will carry to the distance of one or two miles, and plant from twenty-five to thirty forest trees per day."

The committee who awarded Mr. H. the premium, add the following to his statement: "In transplanting trees, though great care be exercised, there will be a severe loss of roots, and the tops should be reduced in proportion to this loss. Where stones can be procured, it is well to place a number of good size over the roots at a little distance from the trunk. They tend to prevent the roots from working in the ground, and also to keep the ground moist about the trees."

Good Crops in Indiana.

Eds. Cultivator—Ira Hopkins having stated in the November number of the Cultivator, (1848,) how thirty bushels of wheat could be raised to the acre, I have concluded to tell you how I raised one hundred bushels on three acres, and eighty-four bushels on three acres and eighty-nine rods, the past season, on land that produced but thirteen bushels to the acre in 1839, which was one of the best wheat seasons in this neighborhood, we had been favored with for the last ten years.

In the spring of 1847, I plowed three acres of clover and timothy sod, as deep as possible. On the 16th April, harrowed, cross plowed, harrowed again, made drills about two feet eight inches asunder, manured the drills liberally, dropped potatoe sets in the drills, about nine inches apart, covered by running the plow both ways in each drill. Some days after, pulled a little off the top of each drill with a hoe. When the plants were 8 or 10 inches high, plowed the soil from each side of the drills, run a cultivator between to level and pulverise; run the plow both ways, and threw back the soil to the plants.

On the 14th September, commenced raising the potatoes with the plow, by taking eight or ten drills at a time, and plowing round them, the first furrow turned one side off the two outside drills, the next threw out the middle, the next turned over the other side, the next furrow turned up the space between the drills; thus plowing all the ground thoroughly, and so deep as to turn up a little of the subsoil. Used hoes after the plow, and when all was plowed, harrowed both ways. Then plowed the ground as deep as possible into lands, 2 rods wide. Sowed one rod at a round, and on the 30th of September, sowed one and a-half bushels of Mediterranean wheat to the acre.

We may let the wheat grow till I tell you of the produce of the potato crop; but I cannot tell you this exactly, though I can tell enough to show that a medium potato crop produces more value than a good corn or wheat crop. I sold 350 bushels at 25 to 30 cents per bushel—$92.07. Kept 101 bushels of the middle-sized for seed. Gave the small ones to the cows, and supplied a family of thirteen persons eleven months, besides a man half of the time, and four or five hands a month in harvest. I may say that potatoes, last season, did not produce half as much, as they took the rot during a very wet time in August. When the weather changed the rot ceased, and none have rotted in the cellar. This is the first appearance of the potato disease I have seen, except the two previous years, the end attached to the stem, rotted in a few instances.

In April the wheat appeared too rank, and I turned 100 sheep on it for a few days; still some spots lodged. On the 20th June, reaped it—stacked it when cured. On the 6th September got it thrashed by a machine, and had 101 bushels, weighing nearly 63 pounds per bushel. Sold part at 72 cents per bushel.

You will observe the number of plowings this piece of ground got. From conversing with an Englishman and reading the Commissioner of Patents' Report for 1847, I find that the English and Germans, generally plow the ground twice at least, before sowing wheat.

The three acres eighty-nine rods, was clover and timothy sod also, and was manured in the winter of 1845 and 1846, with 80 two-horse wagon-loads of barn-yard manure, plowed deep and harrowed, and planted in corn. The cultivator was run four times through the corn, but the plow never. I think it produced 60 bushels to the acre. I did not measure it, but I measured another field the same season. The spring of 1847, sowed it with barley, and it produced only seventeen bushels to the acre, and never got more than this of spring barley to the acre. After harvest, I scraped up all the manure I could get, and scattered it over the stubble, plowed it down, and on the 11th September sowed six bushels of what is called red-chaff wheat, on the furrow, and harrowed it both ways. Reaped on the 22nd June, got it thrashed by a machine, on the 6th September, and had 84 bushels bright plump wheat, rather over 63 lbs. per bushel.

I delayed forwarding this, till I had got out some barley, the produce of three acres and 157 rods, on which I sowed 11 bushels, or 2¾ bushels to the acre, which is half a bushel more than I ever sowed before. It was highly manured in the spring of 1847, and planted in corn and pumpkins, and brought about 60 bushels corn to the acre, and an immense quantity of pumpkins. The produce is 70 struck bushels, weighing rather less than 48 lbs. per bushel, which is the legal weight of barley in Indiana. In 1847, I sowed eight bushels on three acres eighty-nine rods, or about 2¼ bushels to the acre, and had 61½ bushels, weighing 49 pounds per bushel—each producing about 17 or 18 bushels per acre. In 1846, I sowed 11 bushels on 5½ acres or two bushels to the acre, and had but 77 bushels, or 14 bushels per acre. Part of this land was rather flat and wet, and I suppose all my land is too heavy for barley—it bakes very hard after rain. John J. Craig. *Madison, Indiana, January* 16, 1849.

Breaking Rocks by Fire.

Eds. Cultivator—While perusing the February No. of *The Cultivator*, I observed a statement from one of your correspondents in regard to the manner in which he cleared his land of stones. His mode was to excavate a large hole upon one side of the boulder, and partially under the rock which he wished to remove, and then roll it in. I think the process might well be replaced by one which is much more economical. Your correspondent observes that it is very hard to drill some "hard-head" rocks; an assertion which I truly confirm, having been engaged in the business myself, for weeks in succession, upon my father's farm, in Lewis Co., N. Y.

In 1843, we were clearing a piece of ground of stone by the aid of the drill and powder; one very cold day a fire was built upon a rock, which was, perhaps, 4 feet in diameter, near the wall where we are at work. By means of the heat there were large scales loosened on the top of the rock, which were taken off with a crowbar, and used for filling up the centre of the wall.

Subsequent to this, a fire was built upon the same rock, and sometime after, the scales being removed, it was ascertained that the rock was broken through in two different directions, dividing it into four nearly equal parts.

The quarters being left with face sides, fitted them admirably for laying into wall. From this time henceforth, the drill was dispensed with. Experiment showed that one man could carry a sufficient quantity of wood to break any rock, which a farmer might be desirous of removing from his fields. Another great advantage was, that wood of little value, such as old pieces of rails, stumps, and the like might be used with advantage and economy.

There is one point which must not be neglected, if success is expected; that is, to keep the rock clear of shells while heating. To do this with facility, the tools required are a sharp iron crow-bar and a pair of large tongs. As soon as any shells are found to have started up, the fire should be removed with the tongs, and the scales carefully taken off with the bar. This is the only secret in the process. The object is, that the heat may be applied directly to the solid rock. The fire should then be replaced with the tongs, and so on until the stone is broken. Throwing on cold water is superfluous.

One man can attend twenty of the fires, or one man can perform as much work in this as ten will with drills. The beauty of the process is, that it is performed comparatively without danger or expense. DENNIS JOHNSON. *Mount Airy Agricultural Institute, Pa., February*, 1849.

We have seen rocks broken by the process above described, and we endorse what our correspondent says in regard to it.—EDS.

Good Hogs.

EDS. CULTIVATOR—As you sometimes notice the weight of hogs in your paper, I am induced to send you the weight of two or three lots, slaughtered this season in my neighborhood—not because they will favorably compare with certain individual *pet porkers*, whose weights I have seen published—but because they were kept in the usual way—put up at the usual time, and fed from six to eight weeks only.

The first was a lot of four, twenty months old, butchered by Mr. David Connor, averaging 397 lbs. The second, a lot of fourteen, butchered by R. S. Wright, Esq. The largest weighed 568; the four largest averaged 472; the twelve largest averaged 405, and the whole lot averaged 397 lbs. The third, a lot of seven, butchered by Mr. A. J. Brest, averaging upwards of 300 lbs.; two of them, fifteen months old, averaged 334 lbs.

Several years ago, the Chester and Berkshire stock were introduced into this section of country, and have no doubt improved our breed; but few of the pure blood are now found. S. B. T. CALDWELL. *Wheatland, Va.. January* 16, 1849.

Register of the Weather.

Rev. D. C. SAUNDERS, of Medfield, Mass., has furnished the *Mass. Ploughman* with some remarks on the weather, based on a register kept by him from the year 1821 to 1848, inclusive. The observations were made during this period, three times a day—at sunrise, and in the afternoon at two and nine o'clock. The average annual temperature for the whole time, is 46 degrees, 52-100, Fahrenheit. But it is said "a writer on this subject would approximate nearly to the truth, were he to state the annual temperature of this part of the country at 50 degrees, as this thermometer was stationed on the North side of the house, in a very bleak place, where the sun never reached, and in the hot season, was always shaded by the thick foliage of tall trees and dense shrubbery."

It appears that the former 14 years—from 1821 to 1835—were about 1° warmer than from 1835 to 1849; upon which the writer observes—"This fact opposes the general opinion, that the temperature of the country is higher than it was in former years. Every *aged* person knows that the winters now are not nearly so severe as they were in the days of his youth. A thaw, in the winter, was never known in Vermont until about the year 1793, though since it has happened every season. Persons old enough to remember the cold winter here of 1780, when snow came high enough to cover up from sight all the walls and fences; when the crust of the snow was so firm as to bear up a traveller on foot any where; when the sun was not able to melt a flake of snow; and such extreme severity continued for more than six weeks, will not find it difficult to believe that the seasons have become much more mild. But if this climate has not become warmer, its temperature is certainly more *equalised* throughout the *whole* year. We have no such cold winters and deep snows as we used to have. Now, we have no Spring and frequent showers, as we had formerly. But we have a compensation in lovely Autumn. September has become a delightful month, far more so than half a century ago. October, if not November, is about as mild and sunny as September was in earlier times. Winter used to come rough, violent, and lasting, by the 10th November; now it often spares mildly to mortals the 'merry' days of Christmas."

The average temperature of each month, for the twenty-eight years, is given in the following table:

January,	25.12	July,	69.41
February,	25.48	August,	67.70
March,	33.06	September,	59.72
April,	43.94	October,	[illegible]
May,	52.15	November,	37.57
June,	63.81	December,	25.76

This shows that January is the coldest and July the hottest.

The number of *fair* days per annum has been 211; *cloudy* days, 154; *rainy* days, 57; average depth of snow, 30 inches. "The *warmest* year was in 1828, at an annual temperature of 49 8-100 degrees; and the *coldest* year was in 1836, when the annual temperature was 43 63-100 degrees. This shows a *difference* between the coldest and hottest years, of 5 45-100 degrees. But, in general, the difference of temperature between whole years, is quite inconsiderable, or very nearly the same."

Seasonable Hints.

As early in April as practicable, it will be proper to sow oats, barley, spring rye and spring wheat—excepting, in reference to the latter, those sections where the crop is liable to injury from the wheat midge. It has been found that this insect appears at a particular period, and that it only attacks wheat which is in a particular stage—or at least, it is only such wheat that is injured by it. If the crop is too far advanced it escapes, and so it does if it has not reached the stage necessary for the fly to deposit its eggs. The eggs are deposited at the time, or shortly after the wheat is in bloom. Hence, early-sowed winter wheat and late-sowed spring wheat, is least likely to be affected by the midge. But to counterbalance this advantage in regard to late-sown wheat, it is more subject to rust, and is less likely to fill well, generally, than that which is sown earlier. So that the farmer must choose between the different enemies by which he is likely to be assailed—that is, he must determine from which his crops are liable to be most injured, and direct his operations accordingly.

The Black-sea wheat has been found to succeed better under late sowing, than most other kinds. In Maine, Vermont, and the northern part of New-York, it has been sown the latter part of May and sometimes as late as June, and given good crops.

The usual quantity of seed, for spring wheat, is two bushels per acre. If the ground has been thoroughly stirred the previous year, it will not be necessary to plow very deep, though the soil should be well pulverized.

Of oats, it has formerly been the practice to sow only about two bushels per acre, and in some instances less; but so far as we are informed, all the large crops of this grain, have been obtained by sowing from three to four bushels per acre. It is not very uncommon, of late years, for from eighty to a hundred bushels of oats to be raised on an acre, but we have never heard of any such yield, when less than three bushels of seed was used.

Of barley, it is usual to sow about four bushels of seed per acre. The best soil for this crop is a warm loam. We have been informed that a fly similar to the wheat midge, commonly called the barley midge, has latterly attacked the barley crops in the western part of this State. Not having had an opportunity to examine the insect, we cannot speak in regard to the proper mode of preventing its ravages.

It is common to lay down lands to grass in connexion with most spring grains. If the object is hay, and the soil is of a medium character as to dryness, we would recommend the use of the following mixture for one acre:

Red clover, (*Trifolium medium*,) 8 lbs. or 4 qts.
Timothy, (*Phleum pratense*,) 8 qts.
Red-top, (*Agrostis vulgaris*,) 1 bushel.

If the object is pasturage, we should use the following:

Medium clover, 2 qts.
White do 2 qts.

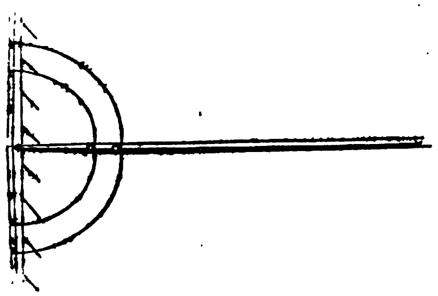
(If white clover comes up in the soil without sowing, it may be omitted.)

Kentucky blue-grass, (*Poa pratense*,) 8 qts.
Timothy, 4 qts.
Orchard grass, (*Dactylis glomerata*,) 1 bushel.
Red-top, ½ bushel.

On wettish soils, the red clover may be omitted. The orchard grass requires a very large quantity of seed, on account of its light and chaffy nature. The different kinds of seed may be mixed together, by slightly wetting them, and may be readily sown by mixing ashes or plaster to prevent their sticking together. It is best to sow them after the grain has been harrowed in, and they will be sufficiently buried by a brush harrow, or a very light iron-tooth harrow.

Improvement in the Rake.

Eds. Cultivator—Being a mechanic as well as farmer, I would take the liberty of suggesting a small improvement in the manufacture of the hand-rake. Instead of the wooden bow, take wire of a suitable size, cut it off the right length, and bend it round so as to form a loop at each end, and in the middle, as represented in the annexed drawing; flatten them down a little, and after the handle is made fast in the head lay on the curved wire and insert wood screws through the loops into the handle and head. Rakes are more expeditiously made in this way than any other; they are cheaper, more durable, and much easier repaired. Jason Smith. *Tyre, N. Y., Feb. 24, 1849.*

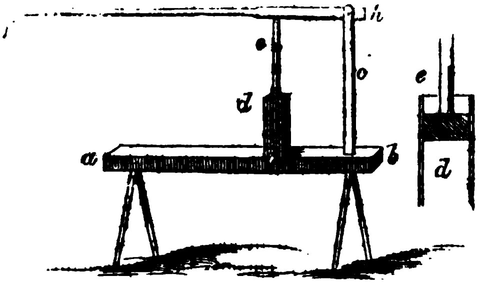


45—IMPROVED RAKE.

Sausage Stuffer.

Eds. Cultivator—The following is intended to represent a sausage stuffer, which is in very common use in this section of country, and I think would be a proper accompaniment to the sausage cutter mentioned in the January number of *The Cultivator*, page 26. I think it preferable, in some respects, to the one mentioned in the December No., 1846, as almost any person can make one for his own use.

A. B. is a piece of scantling, about 4 inches square and 3½ ft. long, with four legs, about 18 inches high, something like a carpenter's trestle; C. is an upright piece, about 2½ inches square, and 18 inches long, mortised into A. B. tight, about 6 inches from the end; D. a small box, about 10 inches from C., 9 inches high above A. B., and fastened to the same, and four inches square inside the box, in which the sausage-meat is to be put. There is a small tin spout on the side, near the bottom, through which the meat passes into the skins. E. about 2½ inches square, 14 inches long, mortised into a block 4 inches square, with a moveable joint, the block to fit pretty tight in the box D; and F. H. a lever, 5½ feet long, 2½ inches square at one end, and round at the other; which is used as a handle to work up and down the block on the end of E. which fits in the box D. A Subscriber. *Loudon Co., Va., Feb. 12, 1849.*



46—SAUSAGE STUFFER.

Benefits of Wool Depots.

Eds. Cultivator—In conversation with gentlemen from different parts of the state during the winter, I find that the facilities for selling wool are far greater with us, than in many other sections, and that the depot system is imperfectly understood and appreciated by many. In view of these facts, I thought it might not be amiss to suggest some thoughts for the information of those who are unacquainted with the operation of that system; believing as I do, that if they understood the advantages to be derived from it, all who have to depend on the agents of manufacturers, or the speculator, for purchasers, would patronize the depot.

The greatest objection I find to this course, is a want of confidence in the responsibility of the agents. Three depots only have as yet been established, and I can speak of only one of the agents, as I am unacquainted with the others.

With Mr. Blanchard, the agent at Kinderhook, I am well acquainted, and know him to be well qualified in all respects to conduct such an establishment, and that his experience for several years past has added greatly to those qualifications; that he is a man of sterling integrity, that he has given general satisfaction, and enjoys the confidence of all who have patronized his establishment; and I recommend him to all who approve of the depot system, as every way worthy of their patronage.

The depot system is conducted upon the well known principles of all other commission business, and facilitates the sale of wool by collecting large quantities of the various grades at one place; thereby enabling the manufacturer to purchase the grades adapted to the style of goods he makes; inducing many to visit the depot for that purpose, and creating competition advantageous to the seller. But a greater advantage arises from the fact that the agent understands, and can judge of the value of the article with as much certainty as the farmer can judge of the value of a bushel of wheat, or a pound of pork; for with those articles, the farmer has a basis on which to found his estimate of their value,—the prices of flour and pork per barrel being a reliable standard; so with beef and all kinds of grain; the difference in the quality of these articles being so small, and the standards of weight and measure so well understood, that he can arrive at their value with great certainty.

Not so with the article of wool; that has many different grades, each bearing a different price, varying from twenty to sixty cents or more per pound, and any of the well selected flocks have qualities differing in value from twenty to twenty-five cents per pound.

These different qualities cannot be known with any degree of certainty to the grower, because it requires much practice in handling and assorting for the manufacturer, to make a man a competent judge of the different sorts contained in any flock; hence, from the nature of the farmer's pursuit, the impossibility of his knowing the difference; hence also the importance of a depot for wool, where it may be assorted by skilful hands, making the value of each sort available to the grower.

To fix a price for wool, there must be a reliable basis on which to found that price; with that also, the grower is as much in the dark as in determining the different qualities of his wool; but with this the agent is as familiar as with the different grades he handles, basing that knowledge on the prices of cloths in market, and knowing the grades of wool of which the various qualities are made, and the price of manufacturing each quality, he has no more difficulty in determining the value of the different sorts than the farmer has in determining the price of a bushel of wheat, by the value of a barrel of flour; and from the knowledge he has of the cloth and wool markets, and the quantities of each in the different markets in the country, he is better able to judge of the fluctuations of trade, and to calculate with more certainty the probable rise or fall in the market.

Assorting wool, and selling to the manufacturer, at the different prices he is willing to pay for those sorts, is what the speculator, as a general rule, relies upon for his profits,—paying the grower, as he usually does, for well bred flocks, about what the low grades are worth.

It is well understood by persons conversant with such matters, that the manufacturer is willing to pay more according to its value, for the grades he works, than he will for promiscuous lots of different grades, and that the manufacturer of fine wool, places a higher value on such wool, than the manufacturer of coarse wool; so also with the manufacturer of coarse wool, he places a higher value on the kind he works, than the manufacturer of fine wools.

Having wool assorted by competent judges, enables each man to determine whether his flock is above or below the standard of his neighbor, and whether he is pursuing the most judicious course in point of economy in keeping the kind of sheep he does.

The depot system gives an opportunity for interchange of views among wool growers, meeting at the depot, and communicating such information as they may have derived from experience; and enables them to form correct opinions of the different breeds of sheep, and what improvements are made in breeding; as the character of each flock is ascertained from the books of the depot agent in such a way as to put at rest all dispute.

The number of fleeces are there registered, the different qualities ascertained, the weight of each, and the dollars and cents they produce; securing to the grower much valuable information and many facilities for the successful prosecution of his business;—enabling him to form correct views, draw correct inferences, and make them available to his interest, and gratifying to his desire for improvement. DANIEL S. CURTIS. *Canaan Centre, N. Y., March* 10, 1849.

The Spring Season.

EDS. CULTIVATOR—The spring is a most important season to the farmer. In all cold climates, where the warm and growing season is short, much depends upon getting our summer crops in, in good season, and in good order. The land should be well tilled, and the surface well pulverised, so as to give the roots of the young plants a healthful and vigorous growth in the early part of the season. This enables them to stand either too much wet, or too much dry weather, and the attacks of worms much better than if got in late in the season, or in bad order. The straw of grain sown early, is not as subject to rust or lodge, as that sown late; and grain which is forward, and ripens early, is usually much better and heavier than that which is late. The farmer who gets his crops in well and in good season, is most sure of a good yield; besides, if he gets his spring's work done early, he will be most likely to do the whole work of the season in good time, and will have time to do it well; while, if he gets behind time in the spring, he will be most likely to get behind time through the whole season; and being drove with his work, will not be likely to do it well; and if he keeps an account of outgoes and incomes, will be most likely to find his profits much less than they would have been, had his spring's work been done in season.

The spring is also important in another point of view. Almost all of our domestic animals drop their young at this season; and the same rule that applies to the vegetable, applies with equal force to the animal kingdom, viz: that we pay particular attention to them while young, so as to give them a healthful and vigorous growth in the start. All experience has shown that if we would rear good stock, we must give them good keeping while young. In cold climates, all animals intended to be reared, should be dropped as early as the climate and season will admit. This enables them, with good keeping, to become so large and hardy, as to stand the first winter well; while if dropped late in the season, and poorly attended to, their small size,—slender and feeble constitution, illy fits them to stand our severe winters. The first of March is the best time for calves. This enables them to make good use of the early grasses as soon as they start, and gives them the benefit of the whole season of pasturage. And further, the dams of all young animals, require particular attention and good keeping at this season, or they will run down and become poor. Dairy cows especially, should have the best of care, if we expect a good yield from them during the season. The milk drawn from the cow is a monstrous draft, and if she is suffered to get poor in the spring, she will remain so during the season, and the yield of milk will be small, particularly during the latter part of the season.

There are many other important matters to be looked to during the spring. Do your old meadows need harrowing and manuring, and additional grass seed? If so, now is the time to attend to it.

Have you a sufficient number of fruit trees, and of the different kinds best suited to your soil and climate? If not, this is the time to plant them.

Have you a sufficiency of shade trees and shrubbery to make your situation pleasant? If not, now is the time to plant them. It will cost you but little labor. Plant them, keep cattle from them, and natural agents will do the rest.

Although we would not encourage extravagance of style in our common farmers, still we can see no good reason why they should not practice and encourage correct taste, as well as those engaged in other pursuits. It is believed that those farmers who are the most particular in all their operations, are the most prosperous, provided they avoid what may, (as applied to farmers) be justly termed extravagance.

The time when a particular job is done, may not be of much importance to the manufacturer or mechanic, but to the farmer it is all important that he does almost every thing at the right time. He has to depend upon natural agents for success; and they will not come to his aid, unless he accommodates them as to time. Nature does not alter her laws or rules, to suit either the ignorance, misjudgment or slackness of the farmer. If he plants his corn too late in the spring, she will not stay the frost in the fall to give it time to ripen. If then, we would be benefited by natural agents we must so observe their laws as that they come most readily to our aid; and there is no season of the year when this observance is more important than in the spring. FARMER. *Columbia*, *Feb*. 24, 1849.

Notices of Publications.

THE AMERICAN FARM BOOK; or Compend of American Agriculture; being a Practical Treatise on Soils, Manures, Draining, Irrigation, Grain, Roots, Fruits, Cotton, Tobacco, Sugar-Cane, Rice, and every Staple Product of the United States, with the best methods of Planting, Cultivation, and Preparation for Market: By R. L ALLEN. New-York, C M. SAXTON.

"The American Farm Book" is a handsome dollar volume, by one of our most correct agricultural writers, systematically arranged, and embracing those subjects of most general interest to the practical farmer, treated in a plain and popular manner. It is a reproduction of the "Brief Compend of American Agriculture," published by the same author about two years since, and which met with so rapid a sale, as to induce a new and enlarged edition, under the more appropriate title now chosen; and we are glad to hear that this is intended as one of the first in a "Series of lessons for the American Farmer," to be issued by Mr. ALLEN; who, from his good judgment, familiar acquaintance with rural affairs, and ability as a writer, is peculiarly qualified for such a work. The volume before us will be found useful to the farmer of the north and the planter of the south, treating as it does of the staple products of every section of our country. It is illustrated by about 100 engravings, and is got up in a style, creditable to the enterprising publisher.

THE ARCHITECT; a series of Original Designs for Domestic and Ornamental Cottages, connected with Landscape Gardening, adapted to the United States; illustrated by Drawings of Ground Plots. Plans, Perspective Views, Elevations, Sections and Details By W. H. RANLETT, New York.

We have on several previous occasions noticed this excellent work. It continues to be published as heretofore, at fifty cents each number, containing two complete plans of houses, with full estimates of the cost. The work is doing much good by the dissemination of correct information on architecture.

AMERICAN JOURNAL OF SCIENCE & ARTS.—We have received the March number of this excellent work. As usual, its contents are of a high character in a scientific view. Among other articles, we notice the following: Some new discoveries respecting the Dates on the Great Calendar Stone of the Ancient Mexicans, with Observations on the Mexican Cycle of Fifty-two Years, by E. G. SQUIER; on the comparative value of different kinds of Coal for the purpose of Illumination; and on methods not hitherto practiced for ascertaining the Value of the Gases they afford, by ANDREW FYFE; Parallelism of the Palæozoic Formation of North America, with those of Europe, by ED. DE VERNEUIL, translated with corrections, by JAMES HALL; Notes on Upper California, by JAMES D. DANA. This work is conducted by Messrs. SILLIMAN & DANA, and published at New Haven, on the first day of every second month, at $5 per year.

THE SCHOOL JOURNAL AND VERMONT AGRICULTURIST, is the title of a monthly (16 page octavo.) published at Windsor, by Messrs. BISHOP & TRACY, the editors of the "Vermont Chronicle," the Nos. of the current vol. of which have come to hand since our last. It is devoted in equal parts, to Agriculture and the cause of Education in Common Schools, a subject of great importance to our farmers, so many of whom are dependant upon these schools for all the "schooling" they receive. It is handsomely printed, and published at the extremely low price of twenty-five cents a year, where 16 copies are taken.

WORKING FARMER.—We have received the first number of a publication with this title, published at New York, by KINGMAN & CROSS, and edited by Prof. J. J. MAPES. It is a well filled quarto of sixteen pages, and is to be issued monthly, at fifty cents a year.

WOOL GROWER AND MAGAZINE OF HORTICULTURE.—This is a periodical just started at Buffalo, by T. C. PETERS, Esq. It is to be published monthly, each number containing sixteen pages octavo, at fifty cents a year. Mr. P is favorably known as an agricultural writer, and will, no doubt, make an interesting paper. It will give particular attention to all branches of the wool business. It is to have a horticultural department, to be conducted by B. HODGE, an intelligent and experienced cultivator.

Answers to Correspondents.

STAGGERS IN SHEEP.—A. G. M., Isle of Wight, Va. The disease you call "blind staggers," is what is called "sturdy" by veterinarians. It is caused by parasitic animals in the brain, called *hydatids*. The origin of these animals, and the means by which they are propagated, are not fully understood. Hogg, the Ettrick Shepherd, says the disease is most destructive on farms that are ill-sheltered, and on which the sheep are most exposed to blasts and showers. A cure is seldom effected. It is recommended to remove the animals, as soon as attacked, from wet places to dry situations. Some have been cured by trepanning, and the extraction of the hydatids.

BONE SPAVIN.—W C. B., Colchester, Ct. The disease which has attacked the hock joint of your horse, is probably bone spavin. The safest treatment for it is blistering, which, if long continued, may absorb the bony deposite, or at least lessen the inflammation. The use of the chisel or the hot iron, in cutting or burning the swelling, is discouraged by the best farriers.

TOBACCO FOR SMOKING.—A. C. R., Walden's Ridge, Tenn. We are unable to give you the *modus operandi* of raising tobacco in Cuba, exclusively for smoking. An account of the mode of raising tobacco in Connecticut, will be found in the Cult for 1844, p. 69.

FOWLS EATING FEATHERS.—"A SUBSCRIBER," Windsor, Ct. The habit of eating each other's feathers, which fowls often have, when confined in yards, is not perhaps, fully understood. It is a morbid appetite, apparently induced in the outset, by the impatience of the fowl under confinement. It is very difficult to cure, and we have known it to be kept up till some individuals of the flock, who were made special victims, were almost entirely stripped of their feathers, and sometimes have even had their entrails torn out. The best preventives are animal food, bones, (not burnt) oyster shells, charcoal, and a variety of grains, with clean apartments, and plenty of clean water. Sometimes a particular fowl, shows a more inveterate dispostion to eat feathers than the rest of the flock. It is best to kill or remove such.

TIE-CHAINS FOR CATTLE.—S. G., Bullville, Orange Co, N. Y. The common, and we think the best mode of using these chains, is around an upright stanchion, which is inserted at the lower end into a piece of timber, laid along to form one side of the manger, and for the cattle to feed over. A separate stall and feeding space is preferable for each animal. (See Cultivator for 1847 pp. 184, 185.

FATTENING HOGS.—W. R. W., Vienna Cross-Roads, Ohio In answer to the question whether you "can raise and fatten fifty hogs on one thousand bushels of corn?" we think much would depend on the *degree* of fatness to which they were to be brought. But with a good breed of hogs and proper care in feeding, we should think 20 bushels of corn would make 200 pounds of pork—or ten pounds to a bushel. Some trials have shown twelve pounds to the bushel.

USE OF LIME.—M. L. C., Sangerfield, Oneida County, N. Y. We should think it probable that lime would be useful as a manure on the drained swamp you describe, though at the price you mention, 18 cents per bushel, we have doubts whether its use would be profitable. Better to try it first on a small scale. The vegetable matter of the swamp would be valuable to absorb the urine of animals, and would probably be a good manure, mixed with ashes.

WHITE CLOVER SEED.—W R., Canada West. The price of this article is thirty-five cents per pound, by the small quantity. It can be had at the Albany Agricultural Warehouse. It is not easy to save the seed, as it is seldom grown by itself. Most of the seed sold in this country is imported from Holland.

GRAFTING PEACHES.—C. S., Shelburne, Mass. Peaches are not readily propagated by grafting, and we should think it would not be an object to make the attempt. Budding is the mode generally adopted for this fruit. In regard to remedying the difficulty you experience from the buds winter-killing, we should be glad to receive the suggestions of our correspondents.

MADDER.—The proper time to obtain the roots of madder is autumn. They can be had of J. EATON, of West Winfield, N. Y., at $2 50 per bushel—delivered at Utica.

GRASS FOR PARKS.—W H T, New York. It is not easy to obtain a firm, velvety turf, in closely wooded parks. The best grass we are acquainted with for this purpose, is the common spire grass, or Kentucky blue grass—*Poa pratensis*. Of the Bermuda grass, grown in the Southern states, we have no personal knowledge. The seed of the Kentucky blue grass can be obtained of the seedsmen in New York. It may be sown any time in spring, when the ground is moist. About a bushel, or ten pounds of tolerably clean seed, will be sufficient for an acre.

Notes for the Month.

Communications have been received, since our last, from A Subscriber, B. B. P., A. G. Moody, R., T., Agricola, S. W. Gold. A Subscriber, R*****, Jason Smith, Farmer, W. Bacon, Fleming Grove, G. H. Dadd, J. W. Bailey, J. S. Pettibone, John Tufts, Daniel S. Curtis, M. L. Conger, S. E. Todd, Sportsman, Charles Smith, M. S. Bailey, S. W., R. D. Weeks, I. Hildreth, L. B. G , J. M'Kinstry, J. D. Spinner, C. W. Hillman, R. H. Drake, F. E. Stowe, Reed Burrett, A Practical Farmer, A. J. Keeney, A Raw Hand, Subscriber, E., B. M. Ellis, A. L. Fish, O. R., B. C. M., A subscriber, E. C. Frost, S. W. Jewett.

Books, Pamphlets, &c., have been received as follows: Transactions of the Mass. Ag. Societies for 1847, and of the Worcester Co. Society for 1848, from J. W. Lincoln, Esq.—Catalogues of Thorp, Smith & Hanchett's Syracuse Nursery, and of Hovey & Co's. Pears, Boston—of the Delevan Nursery of F. K. Phenix, Delevan, Wisconsin—of B. M. Watson's Nursery, Plymouth, Mass.—of C. Hamilton's Nursery, Canterbury, N. Y.

☞ Though we publish over thirty communications this month, we have still a goodly number on hand, several of which were intended for this paper, but are delayed simply for want of room. Among these, are those of Dr. Martin, Mr. Holbrook, Mr. Bailey, W. C. W., (this was accidentally mislaid, or it would have had an earlier insertion,) S. W., and others.

Postage of the Cultivator.—In answer to several inquiries, we repeat the notice heretofore frequently given, that "The Cultivator" is subject to "*newspaper postage only.*" See certificate of Postmaster General, in our last year's vol., p. 97.

To our Agents.—It is not necessary that all subscribers should be at one place, or that all names should be forwarded at one time, to enable Agents to receive the paper at the club prices. For instance, if an Agent sends us $2 for two copies, he will be entitled to five more copies for $3—an Agent sending $5 for seven copies, will be entitled to three more copies for $2, or eight more for $5—and three copies for every $2 sent afterwards. We will send the papers to any number of post-offices named, addressed to the individuals named.

R. R. P.—We have not one of the numbers you require to complete your vols. of the Cultivator. ☞ All our unbound Nos. of Vols. 7, 8, 9 and 10, old series, were burnt.

Agricultural Education.—The subject of establishing an institution for the purpose of giving special instruction in reference to agriculture, was brought prominently forward by Gov. Fish in his late message to the legislature. Responding to the recommendation of the Governor, the New-York State Agricultural Society, at its annual meeting in January last, appointed a committee to memorialize the legislature on the subject. A memorial was consequently submitted, in reference to which the Committee on Agriculture for the legislature, brought in a bill, providing,—1. That the State shall appropriate $50,000 for the establishment of an Agricultural School and Experimental Farm; the object of which shall be "instruction in the sciences, in the theory and practice of agriculture, the breeding, raising and improvement of farm stock, in veterinary treatment, in general farm management, in horticulture and gardening," &c. 2. It proposes that the Governor shall appoint a Board of Trustees, to consist of nine persons, one of whom shall reside in each judicial district, to carry the provisions of the act into effect.

The remaining provisions of the bill we omit for the present, as it is now under discussion, and may receive various modifications in its passage.

Mr. Vail's Sale of Short Horns.—We would call particular attention to this sale, an advertisement of which will be found in this number. Mr. Vail has taken great pains in the collection of his herd,—has imported several fine animals from England at very high prices,—and has purchased others here, including some of the best of Mr. Prentice's late herd, at such rates as are always commanded by the best stock. He has also, some choice young animals, of both sexes; and we think those who wish to purchase stock of this breed, can hardly fail to find in this herd, such as will meet their approbation.

New Importation of Short Horn Cattle.—Col. J. M. Sherwood, of Auburn, has lately made an importation of a bull and three heifers, from England. The bull is known as 3d Duke of Cambridge, registered in the fourth volume of the Herd Book as follows:

Third Duke of Cambridge, (5,941,) roan, calved September 14, 1841, bred by Thomas Bates, Kirkleavington, Yorkshire; got by Duke of Northumberland, (1940,) dam, Waterloo 2d, by Belvidere, (1706,) g. d. by Waterloo, (2816,) gr. g. d. by Waterloo, (2816.)

The heifers, which are from eight to ten months old, were all bred by Mr. J. Stephenson, of Stockton-on-Tees, who has long been known as one of the most successful breeders in England. Among other superior animals bred by him, may be mentioned the celebrated bull Belvidere, of whose blood, it will be seen, 3d Duke of Cambridge possesses one-half—both the sire and dam of the latter having been begotten by the former.

We had the opportunity of seeing Col. Sherwood's animals, as they passed through this city. The bull is certainly one of the finest we have ever seen—whether home-bred or imported—both in respect to perfection of form and handling. The heifers are all fine, and without designing any invidious comparison, we may venture to say that the equals of two of them will be found "few and far between."

Fat Animals.—The markets in Albany presented an attractive display of fine meat on the 22d of February. At the Centre Market, Mr. Ed. Kirkpatrick exhibited the beef of two young cows, (four years old) which weighed,—quarters, hide and tallow,—1200 pounds each. They were raised by Mr. Clement Leach, of Eaton, Madison county. The finest one appeared to be a cross of the Durham and Devon.

Mr. James McQuade showed the carcasses of two fat heifers bred by E. P. Prentice, Esq., of Albany, and fattened by Mr. John B. Packer, of Charlton, Saratoga county. The largest weighed 1400 lbs.

Messrs. Putnam & Shaw, at the North Market, showed the quarters of a pair of very superior oxen, raised by Mr. Henry Rhodes, of Trenton, Oneida county, and fattened by Mr. Lyman Brainard, of Attica. These cattle received one of the premiums at the State Fair at Buffalo. Their live weight was 4912 lbs.—dead weight, beef 3430 lbs.—hides 300 lbs.—tallow 324 lbs.—total weight 4,054, or 2,027 lbs. each. These oxen were a cross of the Devon breed with the common stock—were of extraordinary fatness and great weight in proportion to the bone and offal.

Mr. Kirkpatrick had the carcasses of six fat sheep, and Messrs. Putnam & Shaw the same number, mostly a cross of the Bakewell or Leicester and Cotswold breeds, the weight of which ranged from 100 to 130 lbs. each.

Blood Horse.—An advertisement of the imported thorough-bred horse "Consternation," will be found in this number. He is a fine horse, and we are told that his progeny are very promising.

Morgan Horses.—We invite attention to the advertisement of the "Gifford Morgan," and the "General Gifford," to be found in this number. They are both prime animals.

Morgan Horse in Ohio.—We are informed that Mr. N. E. Austin, of Hartford, Trumbull county, Ohio, has procured one of the Morgan horses exhibited at the Show of the New-York State Ag. Society, at Buffalo, by J. Henderson of Mendon, Monroe county. This horse, as we are informed, was bred in Vermont. He is an active, well formed animal, showing much of the genuine Morgan spirit and power.

The Cultivator for Small Farmers.—A correspondent at Susquehannah, Broome county, N. Y., writes: "The idea that the Cultivator is more useful to the large farmer than to the small one, I think very erroneous. In the pages of the Cultivator, every man engaged in agriculture, whether he cultivates one acre or one thousand acres, may, in my view, find information worth much more than the money paid for it."

Good Butter and Good Firkins.—Inquiry is frequently made as to the best wood for firkins. In reference to this inquiry, we have before stated that oak, ash, birch, maple, and spruce, if of proper quality and properly seasoned, had been found to answer well. In regard to maple and spruce, we have lately heard of their use by several dairymen who are noted for the fine quality of their butter. The writer is using from a firkin of prime butter made last autumn, by Wm. Pierce, of Worcester, Otsego county. The firkin was the best of heart spruce, and the butter, which was made in the best manner in the first instance, has kept perfectly sweet. It has not the least taste of the wood, or of rancidity, even where it comes in direct contact with the sides of the firkin. It is proper to remark that the wood alluded to is the white spruce, (*Abies alba,*) and not the hemlock, (*A canadensis,*) which in some sections is called spruce.

HUTCHINGS' PANORAMA OF THE SEA AND SHORES OF THE MEDITERRANEAN.—Having had an opportunity of viewing this splendid work of art, we cannot refrain from calling the attention of the public to it. It is not only beautiful as a picture, but in a high degree interesting and instructive in a geographical view. The representation of places which have long been celebrated in history, conveys to the observer a more correct idea of their situation and appearance than it is possible to obtain in any other way, short of ocular observation.

LARGE HOG.—Dr. P. G. BERTOLET, of Oley, Berks county, Pa., informs us that Mr. ISRAEL RITTER, of that place, slaughtered a hog on the 20th of January last, which was seventeen months old, the weight of which, dressed, was 734 pounds.

EXPORT OF APPLES FROM WASHINGTON COUNTY, OHIO.—Dr. HILDRETH states that that portion of Washington county bordering on the Ohio river, furnished for exportation, last year, twenty-three thousand barrels of Apples. This is an admirable section for this fruit. The first settlers were from the New-England States, and planted large orchards, of the best varieties known.

PALMER'S WHEAT DRILL.—We have received a cut and communication in reference to this machine, which not having arrived in time for this number, we are obliged to postpone to our next.

ERRATA.—In Mr. TODD's communication on "Protection of Working-Horses," &c , in our last, p. 94. the transposition of a line occurs. The *seventh* line from the bottom should have been placed between the *tenth* and *eleventh* lines. The *nineteenth and twentieth* lines from the top, second column, of the same article, should read —and to suffer the penalty of violating a physical law—instead of " and to suffer the penalty of a violent physical law."

Premiums for Subscribers to The Cultivator.

Our offer of Prizes for subscribers to the current vol. of *The Cultivator*, was intended as an experiment; and though some complaint was made that they were offered for the greatest number, without regard to population, &c., the experiment has equalled our anticipations. With our present experience, we shall be able another year, we hope, to offer a List of Premiums, which will prove satisfactory to all who may be disposed to aid us in extending the circulation of our journal.

According to the conditions, (for which see last page of Jan. or Feb. Nos.) the Prizes for this year are awarded as follows :

1st. To James M. Tower, Waterville, Oneida Co., N. Y., for 102 subscribers, $50.

2d. To Hon. Anthony Van Bergen, Coxsackie, Greene Co., N. Y., for 97—$40.

3d. To C. T. Alvord, Wilmington, Windham Co., Vt., for 90—$30.

4th. To Jas. Wells, Johnstown, Fulton Co., N. Y., for 87—$20.

5th. To O. C. Chamberlain, Richfield Springs, Otsego Co., N. Y., for 67—$10.

6th. To P. Kirkpatrick, Hobart, 66—Willets Keese, Peru, 57—C. P. Waller, Honesdale, Pa., 52—A. Carey, Fort Plain, 51, and Geo. Hezlep, Gustavus, O., 51—for the five next highest lists, each the 1st and 2d vols. of the Horticulturist, bound.

7th. To James D. Spinner, Herkimer, 48—L. W. Curtis, Madison, 45—H. Mills, Lowville, 43—Jas. La Roche, Wilmington, Del. 42—M. Davis, Jr., Lynchburgh, Va., 41—B. Macomber, Grand Isle, Vt., 40—Thomas Briggs, Jr., Kingston, Can., 39—Wm. H. Woodburn, Newville, Pa., 36—C. F. Mallory, Romeo, Mich., 33, and Wm. H. White, Vergennes, Vt., 34—for the next ten highest lists, each, a copy of the 2d vol. of the Horticulturist, bound.

8th. To H. B. Tracy, Norwichtown, Ct.—S. Brainerd, Cedarville—J M. Hart, Oswego—R. A. Tappan, Newark Valley—W. S. Maynard, Ann Arbor, Mich.—Charles Root, Gilbertsville—F. H. Fessenden, Brattleboro, Vt —J. Brown, Battle Creek, Mich.—R. S. Bartlett, Binghamton, and E. D. Freeman, Amenia—for the ten next highest lists, each, vols. 5 and 6 of The Cultivator, for 1838 and 1839.

9th. To Wm. M'Kinney, Ida Mills—L. Richmond, Woodstock, Vt.—J. H. Reid, Fredericton, N. B.—D. R. Wheeler, Ellicottville—O. Stevenson, Pleasant Mount, Pa.—John M. Sands, Pleasant Valley, Pa.—A. A. Mullett, Springdale, O.—M. Heminway, Watertown, Ct.—C. Babbit, Walpole, N. H., and Wm. Bailey, Spencertown—for the ten next highest lists, each, a copy of Downing's Fruits and Fruit Trees, or any other work of like amount.

10th. To W. S. Carter, Quechee Village, Vt.—D. S. Curtis, Canaan Centre—Edward Mattoon, Westerville, O.—Charles Anderson, Allegany City, Pa.—A. N. Barber, Harwinton, Ct.—J. A. Ely, Poughkeepsie—Geo. Edwards, Bath—L. Helmer, Ilion—J. Miller, Schoharie, and F. E. Stowe, Bruceville, O.—for the ten next highest lists, each, a copy of Thomas' Fruit Culturist.

Prices of Agricultural Products.

New-York, March 22, 1849.

FLOUR—Common State and Michigan, per bbl., $5.37*a*$5.50—Fancy brands, $6.12½*a*$6.50.

GRAIN—Wheat, per bush., $1*a*$1.12—dull. Rye, 60*a*61c Indian Corn, Northern, 59*a*60c.—Southern, 53*a*56c.

BUTTER—best, per lb., 20*a*22c.—western dairy, 14*a*17c.

CHEESE—per lb., 6*a*7½c.

BEEF—Mess, per bbl., $11.50*a*12.50—Prime, $7.50*a*$8.75.

PORK—Mess, per bbl., $11.12*a*$11.50—Prime, $9.25.

LARD—per lb., 6¾*a*7½c.

HAMS—Smoked, per lb., 8¾*a*10½c.

HEMP—American dew-rotted, per ton, $155*a*160.

TOBACCO—per lb., Kentucky, 5*a*9.

COTTON—Upland and Florida, per lb., 6¾*a*7¾—New Orleans and Alabama, 7*a*9c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40*a*43c.
American full blood Merino,	36*a*38c.
" half blood do.,	31*a*33c.
" one-fourth blood and common,	29*a*30c.

REMARKS.—There is a steady demand for breadstuffs, and considerable stir in the pork trade. Nothing special to note in other parts of the market.

Fishkill Landing Nursery,

Two and a-half miles North from the Newburgh Ferry.

FRUIT AND ORNAMENTAL TREES.

THE subscriber respectfully solicits the attention of Fruit growers and dealers in Fruit Trees to the large stock offered for sale by him this spring, consisting of

20,000 APPLE TREES,

of the most approved varieties, from 4 to 8 feet high, at from $15 to $20 per hundred.

10,000 PEAR TREES,

embracing one hundred of the best varieties to be found, 3 to 7 feet high—$25 to $34 per hundred.

8.000 CHERRY TREES,

from one to three years from the inoculation, 4 to 10 feet high—$31 per hundred.

5,000 APRICOT TREES,

of the best sorts, on peach and plum stocks; 2,000 of which are the Early Golden, a very hardy and productive variety, one to three years from the buds—$12.50 on peach, and $31 on plum stocks per hundred.

30,000 PEACH TREES,

of the most valuable sorts, entirely free from disease, one to two years from the inoculation. $6 to $8 per hundred.

6,000 ISABELLA AND CATAWBA GRAPE VINES,

two to four years old, with fine roots. They have been annually cut back, and are in excellent condition for vineyard planting—$12 to $18 per hundred. Also,

1,000 QUINCE TREES,

mostly of the Apple variety. Currant and Raspberry Bushes, Strawberry Vines, &c., together with about 10.000 Deciduous and Evergreen Ornamental Trees, many of which are extra large.

The subscriber is induced to sell at the very low prices above named, in consequence of the stock being very large. All those who are about planting orchards, starting nurseries, or engaged in the sale of trees, are invited to visit and inspect his stock. The Fruit Trees have been inoculated under the immediate inspection of the proprietor, and mostly from trees in his own grounds, and are *of the most valuable standard sorts.*

From 40 to 50 acres attached to the Nursery are closely set with standard and specimen trees, which greatly increase his facilities for the attainment of correctness.

The new and valuable Peaches which have within a few years past originated at the South, as well as the choice Apples of the West, have been propagated, and are of a fine size for transplanting.

TREES, SHRUBS AND VINES

when ordered, will be taken up carefully, and packed so as to be sent safely to any part of the Union.

Catalogues sent to all post paid applicants. Orders, by mail or otherwise, will receive immediate attention.

DANIEL BRINCKERHOFF.

Fishkill Landing, April 1, 1849.—1t

Valuable Property for Sale.

THE undersigned offers for sale in one body, or in portions, or for Lease to tenants well recommended, the well known CARPENTER'S POINT FARM and Fisheries, situated in Cecil Co., Md.—at the head of the Chesapeake Bay, and on the west bank of the North East River. The shores command the waters both of the bay and the river, and are among the most valuable in the State; they include a number of the buildings and sheds necessary for the active prosecution of the fisheries; the land is of easy cultivation, and enjoys the advantage of ready access by water communication, to the markets of Havre de Grace and Baltimore. The entire tract contains about 650 acres, of which some 125 are under actual cultivation, as many more lying out as common, whilst of the remainder, one half has been recently cleared and the other is very heavily timbered.

For further information, or for wood-cut map showing the position and shape of the property, and the prominent places in its vicinity, application may be made to George Earle, Elkton, Md.; J. F. Houston, Columbia, Pa.; J. S. Skinner & Son, Philadelphia; the office of this paper, or to J. HOWARD McHENRY, Baltimore.

April 1.—1t*

Short-Horns at Auction.

THE subscriber being about disposing of 50 acres of his farm, for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one-half of his present herd,) at his farm, 2½ miles from this city, on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year old and three year old heifers and cows, and 11 young bulls, from 10 months to 2½ years old. Great care has been observed and considerable expense incurred, in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the New York State Ag. Society, and the N. Y. American Institute, attest the estimation in which it is held, wherever it has been exhibited for competition. About eight head of the above cattle, are part of a purchase made last May, of E. P. Prentice, Esq., of Albany, embracing all the Short Horns of that gentleman, and were the product of the four selected cows he retained at his public sale, and possessed much of the blood of the herd of Mr. Whittaker, of England, from whom Mr. P. made importations of stock. The other portion of the young stock inherit much of the blood of the herd of T. Bates, Esq. of Yorkshire, Eng, from whom my importations have been made, being one and two crosses of the imported bull Duke of Wellington, and the premium bull Meteor. All the heifers of suitable age, are or will be in calf by these bulls.

For the information of Southern gentlemen, who may be desirous of introducing Durham stock in that region, and who may entertain an opininon, that that climate is not congenial to their successful propagation there, I submit the following extract of a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, January 25, 1849:

"The bull you sold Col. Hampton, of this State, gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 of his get, now in his yard. They are the most superb yearlings ever bred in the South, and your stock will not suffer from him." The pedigrees of the animals will be issued and circulated a month previous to day of sale. A liberal credit will be given —say 6 to 12 and 18 months, if desired The particulars will be given in the pedigree list. GEO. VAIL.

Troy, April 1, 1849.—3t.

Farm for Sale.

THE subscriber will sell his farm of 300 acres, situate near the centre of the town of Hillsdale, in the county of Columbia, known as the

MCKINSTRY PLACE,

Having been possessed by that family about a century, lying adjacent or contiguous to the route of the Harlem Railroad, and upon which there are 2 good and convenient dwelling houses, one a recently built cottage, and barns, sheds, lofts, and numerous out houses, two wells of pure soft water of a superior quality, excellent orchards of grafted fruit, fine stone wall fences, some first rate fields for any kind of grain, about 45 acres of meadow land, and about 80 acres of wood land, well watered by springs; three small streams run through it, the head waters of the Roeliff Jansen's Kill or Creek rendering it a desirable farm for grazing, and valuable to practical farmers for other purposes of husbandry. It is capable of being divided into two good farms. Title made unquestionable by the undersigned, with the aid and assent of Judge Augustus Tremain, who now resides on the premises; land now worked and occupied by Mr. James Darrow. The farm is now well stocked with Devonshire cattle, and a choice flock of Saxon sheep, which, together with the farming utensils, will go with the old Homestead, if the purchaser wishes.

JUSTUS McKINSTRY.

If desired, one-third or one half of the purchase money can remain on bond and mortgage for a term of years.

Hudson, April 1.—2t.*

Agricultural Ware House,

193 *Front Street, New York.*

THE subscriber, manufacturer and dealer in Agricultural Implements, offers for sale a large assortment of PLOWS, embracing over 200 different sizes and patterns, among them the superior *Premium Plow*, which received the highest premium of the American Institute in 1848, and of the great State Fair in 1847.

This Plow has no equal for lightness of draft, and for all purposes, is recommended with full confidence as being the best in use.

He has also the Centre Draft and Eagle Plows, which will be sold at the lowest rates.

Also, Cultivators, Straw Cutters, Corn Shellers, Fanning Mills, Grain Cradles, Corn and Cob Mills, Portable Grist Mills, Horse Powers, Threshing Machines, and a general assortment of Farming and Gardening Implements, all of which will be sold at extremely low prices.

Brass and Iron Wire Cloth Seives, Screens, &c.

Bone Dust and Guano. JOHN MOORE,

April 1.—2t. 193 Front street, New York.

The old Morgan Gifford,

THE highest blooded Morgan Stallion now remaining, will stand this season at the stable of F. A. Wier, in Walpole, N. H.

Terms $25. $5 of which to be paid at the time of service. and the remaining $20 if the mare proves in foal.

Pasturage furnished as usual.

FRED. A. WIER, Agent for the Proprietors.

March 1, 1849.—5t.*

The Genuine Morgan Horse

GENERAL GIFFORD, will stand the ensuing season, on Mondays and Tuesdays, at the stable of Geo. A. Mason, 2½ miles north-east of Jordan; Wednesdays. Thursdays and Fridays at the stable of D. A. Munro. in Camillus; on Saturdays, at the stable of John C. Munro, in Bellisle.

Terms, $10 to insure. Mares that are not placed directly in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers, at 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and style of action General Gifford more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits.

General Gifford was got by the Gifford Morgan, his dam a Morgan mare. A full description of the origin of the Morgans, and the pedigree of Gifford Morgan, may be found in the Cultivator for 1846, p. 19. MUNRO & MASON.

April 1, 1849—3t.

The Imported Horse Consternation

WAS bred by Mathew Hornsey, Esq., of Stittenham, Yorkshire. England, in the year 1841. He was imported by C. T. Abbot, Esq., in the year 1845. He is now owned by J. B. Burnet. Esq., of Syracuse, N. Y., and will serve a limited number of mares the ensuing season, at his own stables, near the village of Geddes, two miles west of Syracuse. The very best pasture. with plenty of water and the most secure fences, will be provided for mares sent from a distance, at two shillings and six pence a week. No mare taken except at the risk of the owner.

Consternation is of a beautiful, unfading dapple brown color—stands 15 hands and 3 inches high, and is remarkable for vigor of constitution, uncommon development of bone and muscle, and an intelligent kind docile position He is compact and short-legged yet of a rangey and majestic figure. His chest and flank are remarkably full and deep. His action is easy and graceful, yet proud and commanding.

But what is more important perhaps than either, he is entirely thorough-bred. There is no taint of mongrel stock in his long line of ancestry. Indeed there is no horse living, with a more distinguished or genuine pedigree.

His ancestors were of unusual size and strength, and every one of them of good disposition and free from blemishes. His pedigree is briefly as follows, viz:

By Confederate—dam Curiosity, by Figaro,—her dam by Waxy. Confederate was bred by Earl Fitz William, got by Comus—by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

This pedigree is in every particular true and genuine, and can be abundantly established by reference to certificates and volumes of the Stud Book in the possession of the subscriber.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Oneida Castle; Henry Rhodes, Trenton. A Ford or John Best, Rome, and to farmers generally in that vicinity.

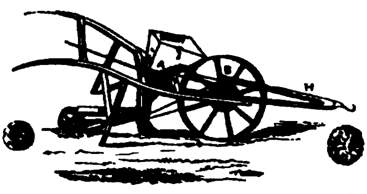
Terms $5 in advance, and $5 additional if the mare is got in foal. April 1.—3t. J. B. BURNET.

To Wool Growers.

A Gentleman who owns 6,000 acres of land in the southern part of the State of Pennsylvania, would like to make an arrangement with a practical man who has the ability to stock part of it on joint account. Any one disposed can address for further information, W. E. T. No. 17 South Water St., Philadelphia.

April 1.—1t *

Emery's Albany Seed Planter.



THE subscriber having had all his patterns for this machine, as also nearly one hundred machines mostly completed destroyed by the late fire, has made an entire new sett, with several important improvements suggested by their use during the last three years.

He is now enabled to offer a much better planter than heretofore. notwithstanding it has already earned the reputation of being "the best planter in use."

Orders solicited and machines warranted.

Albany Agricultural Warehouse, Nos. 369 & 371 Broadway

H. L. EMERY.

Wheeler's Horse Powers, Threshers and Separators.

CONTINUED FROM MARCH NO.

For Engravings and Descriptions of these machines, together with prices, &c., see the March No. of The Cultivator, page 102. For further information respecting them, the public are referred to the following persons who have purchased of me and are using the said machines:

New-York.

Albany—James McNaughton, John McD. McIntyre, Amos Osborn and E. C. Delavan.

Auburn—Joseph Scantlebury.

Buffalo—T. C. Peters & Brother and Edward Cowles.

Ballston—John Talmadge.

Berne—Paul Haverly.

Bethlehem—Peter Magee.

Canajoharie—James Gordon.

Central Ridge—Jacob Enders.

Charlton—Charles Gilchrist and Thomas Kirby

Caroline—Herman Landon.

Coeymans—James J. Mull and Samuel T. Morris.

Chesterville—Christopher Filkins.

Duanesburgh—Alexander Millan, Thomas Knight, Jas. Lendium and James Vandervier.

Esperance—L. & J. Rockwell.

Ellicottville—Wm. Somerville.

Florida—Samuel C. Jackson.

Fonda—Reuben Howe.

Greenbush—J. P. & G. W. Luther, Andrew Phillips and David Harrington.

Greece—Robert Sherman.

Grove Centre—Darius Scovill.

Grovement—Patrick Hughes.

Genoa—James Dunn.

Ilion—Samuel Barringer and Rudolph Getman.

Johnstown—Edward Wells.

Knox—John Basler.

Knoxville—John Dyer and Andrew Batcher.

Lafargeville—J. N. Rottiers.

Leatherville—Samuel J. Walker.

Mechanicsville—Frederick & George Edwards, and Samuel R. Mott.

Middlebury—Nathaniel Manning.

Minaville—James Herrick.

New Scotland—Peter McHarg, John H. Johnston, Peter S. Markle, Andrew Onderdonk and J. V. N. Houghtaling.

New York—A. B. Allen & Co., (10 sets.)

Oswego—Hamilton Murray.

Owego—George J. Pumpelly.

Palatine—John A. Zoller and Christian Snell.

Plattsburgh—James McCreedy.

Port Jackson—S. Thorn.

Reidsville—Hamilton and John Hempstead.

Rensselaerville—Abner West, Square Cook, Luther Hazard, Benjamin Palmer and Erastus Cooke.

Ridgway—Wm. F. Potter.

Root—Henry Lyker and Robert J. Mitchell.

Schodack—Jacob H. Best, John Phillips and Wm. Hagerman.

Schoharie Court House—Abram Deitz and Martin L. Shaffer.

Schaghticoke—Ira Gifford and Amos Briggs.

Schenectady—A. H. Ostrander, M. E. Myers, Isaac Vedder and A. L. Linn.

South Danby—E. L. B. Curtis, (2 sets.)

Scottsburgh—Charles Brewer.

Sparta—Benjamin Bonner.

Summer Hill—George Newton.

Schoharie—Charles Frink.

Troy—Henry Warren, (4 sets.)

Weedsport—Aaron Bayles and Peter Douglas.

West Charlton—Robert Gilchrist.

Washington—Levi G. Collins.

Westerlo—Hamilton Ford and Hiram Hempstead.

Vermont—W. Brown, Alburg—Pierce, Davy & Co., Burlington—A. L. Hatch and D. E. Griswold, (4 setts,) Grand Isle—Dyer Hill, Isle La Mott—John Wood and Loyal Huntington, Middlebury—Timothy D. White, South Hero.

Massachusetts—P Howard, Ashby—Ruggles, Nourse & Mason, Boston—W. H. H. Sigourney, Grafton—Horace Emery, Townsend—D. A. Wood, Webster—Paul Whitin & Son, Whitinsville—J. C. Morse, (4 sets,) Worcester.

Rhode Island—J. L. Durfee, Newport—Philip Almy and David Almy, Portsmouth.

Connecticut—C. A. Hotchkiss, New Haven—S. J. Stoddard, South Britain.

Pennsylvania—M. Bell, Hollydaysburgh—L. & R. Styles, Troy.

South Carolina—John N. Scofield, Columbia.

Virginia—J. Hardesty, Harrisonburgh—W. Peters, Georgetown, D. C.

Ohio—Samuel Monk, Cincinnati—John Howell, Huntsburgh—J. V. Stanhope. Kinsman—E. T. Osborne, (2 sets.) Sandusky—John Stouffer, Xenia.

Indiana—Otis Hinkley, Monnt Vernon.

Illinois—Dav. Hughes, Antioch—J. A. Wight, (4 sets,) Chicago—George H. Easton, Half Day—Elijah Willard, Jonesborough.

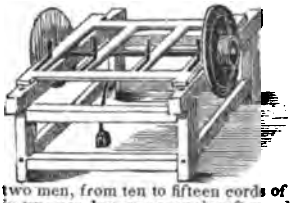
Michigan—J. L. Smith, Lexington—J. A. Austin. Portsmouth.

Wisconsin—D. & M. Conover and H. B. Hawley, Milwaukie.

Canada East—R. N. Watts, M. P. P., Drummondville—Francis Baby, Batiscan.

Canada West—James Croil, East Williamsburgh—Donald McDonald, St. Andrews

Emery's Saw Mill.



THE Mill is made strong with joint bolts, patent metalic boxes, large and long shaft and heavy fly wheel, and may be used with the single or double Horse Power. For Single Power, a 22 inch saw is used; for a Double Power. a 24 inch saw, and with the One Horse Power and two men, from ten to fifteen cords of hard wood may be cut twice in two per day, or as much soft wood as they can handle.

The same Mill, by changing saws, can be used for slitting boards and plank for fencing, &c.

Price, with 22 inch saw, in complete running order, $35.

Grant's Fanning Mill.

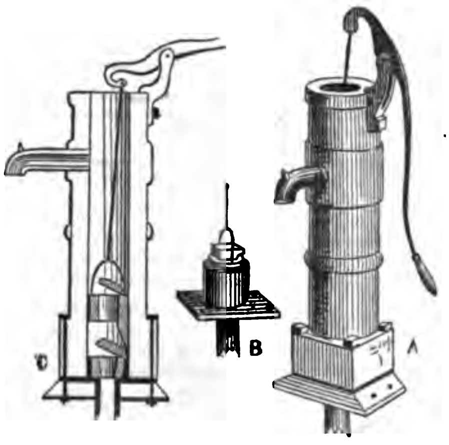
THIS is considered one of, [if not] the best mills in use. It is equally well calculated for all kinds of grain, clover and grass seeds. It may be operated by hand or horse power. The largest size, when attached to the Horse Power, with one person to feed it, is capable of cleaning perfectly one hundred bushels of wheat per hour, as it comes from the separator of the threshing machine. This Mill has received the first premium at four of the New York State Fairs, also at the State Fair of Maryland and Pennsylvania Certificates are unnecessary, as all mills are warranted. Price for No. 1, $21; No. 2. $23; No. 3, $25; No. 4, $27; with pulleys, $30. The above Machines are for sale at the

Albany Agricultural Warehouse & Seed Store,

Nos. 369 & 371 Broadway, Albany, N. Y.

HORACE L. EMERY

☞ Price and descriptive catalogues, Gratis.



Adams' Patent Pump.

THE above cut represents the most approved and simple arrangement for well or cistern pumps—at the same time combining cheapness and durability, and little or no expense for repairs.

It having been extensively used in many sections of the country for ten years, its excellence has been established beyond a doubt.

The manufacturer recently received a diploma for its being the "best pump," from the Massachusetts Charitable Mechanics Association at Boston.

It being made of saturated wood, and water proof, it neither freezes, splits or decays. It is readily connected with lead pipe of any size, by means of a solid metalic flange and cup, as seen at B. in the cut—the lower box and valves are set within the cup, and all inserted in the lower end of the barrel of the pump—until the flange (by means of melted resin) makes a water proof and tight joint with the barrel; when a base board (with a hole through the centre for the passage of the supply pipe) is bolted firmly against the under side of the flange; thus forming a strong and permanent connexion.

The valves are so constructed that by throwing up the handle the upper box trips the lower valve. and the water instantly falls back—leaving the pump empty. Rights for making and using the pump in this State and the Western States. can be obtained by addressing the subscriber. They will be furnished to the trade at wholesale or retail, on as reasonable terms as any metalic pump.

HORACE L. EMERY.
No. 369 & 371 Broadway, Albany, N. Y.

A Book for Everybody.

COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Veterinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK:

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

First—It is a mature work and a practical one, one upon which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for THE PEOPLE.

Secondly—It will have an unprecedented sale on account of its cheapness. It makes a volume of 288 closely printed pages. Illustrated with nearly 200 beautifully executed engravings, by Brown, and is sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It contains full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

BOOK FOR EVERYBODY,

As well for the man who eats Fruit as for him who raises it.

This valuable work is just from the press, and is now for sale at our counter, and will be offered for sale by our regular agents throughout the country.

JOHN P. JEWETT, Publisher, 23 *Cornhill, BOSTON*.

April 1.—2t.

Highland Nurseries, Newburgh, N. Y.

(*Late A. J. Downing & Co.*)

FRUIT AND ORNAMENTAL TREES, &C.

THE undersigned beg leave to tender their acknowledgments to the patrons of this establishment, and the public in general, for a continuation of the extensive patronage bestowed on their predecessors. Their greatest ambition is to merit, in every respect, the high character which the nurseries have attained from the high standing of the former proprietors.

The subscribers, desirous of meeting the constantly increasing demand for the trees grown here, have already stocked nearly 20 acres of ground, in addition to the nurseries of the former firm, (A. J. D. & Co.;) among which are all the recent introductions of merit, both of this country and Europe.

Their stock of trees for spring planting is unusually large and fine, especially of all the *proved* and standard varieties.

10,000 to 20,000 APPLE TREES,

Three to four years from the bud; all budded on two to three year transplanted strong stocks. Trees eight to ten feet high, $25 per 100; and trees five to 8 feet high, $18 to $20 per 100.

10,000 PEAR TREES,

Embracing all the best and newest varieties, four to seven feet high. $45 to $50 per 100.

Also, a large stock of all the choicest and rarest kinds of Plum, Cherry, Apricot, Peach, Nectarine, and Quince Trees, &c., &c., together with a general assorment of Gooseberries and Currants, (all the new kinds.)

Grape Vines, Raspberries, Strawberries, Esculent Roots, &c. For prices, see Catalogue, supplied gratis on application, (*post paid*.)

A large stock of Evergreer and Ornamental Trees, Shrubs, &c. suitable for the embellishment of new grounds, street planting, &c., at very moderate prices.

Two year old Buckthorn and Osage Orange Plants, for hedges.

Portugal Quince Trees,	standard	high, six feet	each,	$1 00
do	do	Quenouille,	do	1 00
Angers, (true,)		do	do	1 00
Smaller trees of the above,				0 50

Orders respectfully solicited, and will receive prompt attention. Trees will be packed with the greatest care, and shipped to any part of the Union or Europe.

A. SAUL & CO.

Highland Nursery, Newburgh, March 1, 1849.—1t.

Portable Self-Acting Cheese Press.

Patented August, 1847, *by Chester Stone*.

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

TREES! TREES!

COMMERCIAL GARDEN AND NURSERY

Of Parsons & Co., Flushing, near N. Y.

THE Proprietors of this Establishment, invite public attention to their large assortment of every desirable variety of

FRUIT AND ORNAMENTAL TREE OR SHRUB

Their importations of everything new in Europe are annually continued, and they offer a very large variety of

ORNAMENTAL TREES AND SHRUBS,

imported expressly for arboretums and pleasure grounds. Their collection of Roses is annually enriched by novelties from abroad many of which may be found described in their new work on the Rose, recently published.

FRUIT TREES

Receive their particular attention, and are propagated under their personal supervision; this care, with their possession of extensive specimen grounds, in which is tested every variety of fruit they cultivate, enables them confidently to guarantee the genuineness of the varieties.

Their care in pruning and cultivation enables them also to send out thrifty and well formed trees. From their large scale of propagation, they can offer to dealers very liberal discounts, where hundreds or thousands are taken. Orders or inquiries can be addressed to the proprietors, at Flushing, near New-York, where Catalogues will also be furnished.

They have formed a branch at Brighton, near Boston, and by the entire success of their trees transplanted thither, have thoroughly proved the superior adaptation of Long Island trees to the soil and climate of any part of New England.

At the season of transplanting, a salesman will be at this branch to furnish those who may prefer obtaining their supply thence.

March 1.—2t.

Fruit Trees.

THE subscriber would announce to the public that he has for sale at his nursery, a general assortment of Fruit Trees, embracing nearly all of the choicest kinds, all of which have been obtained from the most reliable sources, or from bearing trees of well known varieties, and propagated with his own hands in the most careful manner; and a large quantity have been proved on his own grounds. His stock of apples especially, is unusually large and fine, and will be sold at reasonable prices, with a liberal discount to nurserymen and venders of trees. Persons at a great distance, wanting small trees, will be supplied at a corresponding price.

Scions for grafting or budding, of all the most rare and scarce varieties, at $1 per 200, with a discount where 50 or 100 varieties are ordered. And large quantities of the more plentiful kinds, at reduced prices, in proportion to quantity.

Red Antwerp Raspberries by the 1,000, cheap.

Catalogues gratis to all post paid applicants.

Canterbury, Orange Co., N. Y., —3t. C. HAMILTON.

To Nurserymen, Gardeners, and Horticulturists generally.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes, by a strict attention to their interests, to render his services valuable and respectfully solicits their patronage.

References—A. J. Downing, Esq., and A. Saul & Co., Newburgh; H. Reid, Murray Hill, N. Y., and Elizabethtown, N. J.

GEO G. SHEPPARD,
143 Maiden Lane, New-York

N. B. Orders for Russia Mats, for Budding or Packing, immediately supplied. New-York, March 1, 1849.—2t.

Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample. T. C. PETERS & BRO

Buffalo, Dec. 1—6t.

Red Antwerp Raspberries.

5,000 Plants of the true Large Red Antwerp Raspberry, for sale by the subscriber, at $6 per hundred or $50 per thousand. The Plants are large and strong, and warranted true.

S. A. BARRETT

Milton, Ulster Co., March 1, 1849.—1t.*

Thorp, Smith & Hanchett,

(Late Thorp & Smith,)

***Proprietors of the* Syracuse Nurseries,**

HAVE now ready for sale a very extensive stock of the most valuable kinds of Fruit Trees, embracing most of the standard varieties, (including those most highly approved and recommended by the late Pomological conventions at New-York and Buffalo,) which, in *vigor, thriftiness and symmetry* of growth are not excelled by the productions of any other nursery in the State. Having more than *forty acres* now chiefly devoted to the cultivation of Fruit Trees, they are prepared to sell at Wholesale *as largely*, at prices *as low*, and on terms *as reasonable*, as any other nursery establishment here or elsewhere. The superior quality of their trees must contine to recommend them to amateurs, who desire to unite ornament with utility; and to orchardists, whose chief aim is to obtain such only as are healthy and vigorous.

They have also, a large assortment of finely formed Ornamental Trees, and several thousand *Seedling Horse Chestnuts*, at very moderate prices.

Orders will be promptly attended to, and trees packed safely for transportation to any distance.

☞ Catalogues furnished *gratis*, to all *post-paid* applications. They may also be obtained, and orders left at the store of M. W. Hanchett, between the Railroad and Syracuse House.

Syracuse, March 1, 1849.—3t.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers, Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud, and well branched, including the very best sorts. Red Antwerp, Fastolff, Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c. Dahlias, including the new fancy sorts.

Descriptive priced lists sent to post paid applicants.

Feb. 1—4t. B. M. WATSON.

A Virginia Farm

FOR SALE, within sixteen miles of Richmond, Va., containing 253 acres of superior land, well adapted to the culture of wheat, corn, oats and potatoes. The James River and Kanawha canal runs through the premises. The situation is truly splendid, viewing the surrounding country many miles. There is a very fine orchard of apple, pear cherry and peach trees--many fine springs of superior water. The house has just been put in good repair. The outhouses are nearly all new, built in the best manner, and can accommodate 30 head of horses and cows. There are two churches, a post office, tavern and physician quite near. Also, a market for all kinds of fowls, meats and vegetables, within one-quarter of a mile from the farm. A saw and grist mill also in sight. One of the owners is going to California.

All information will be given, by applying, post paid, to

B. B. ALLEN, No. 19 Platt st., New-York.

March 1, 1849.—2t.

To Farmers.

THE LODI MANUFACTURING CO., have now on hand and ready for sale, a large quantity of their *NEW AND IMPROVED POUDRETTE* freshly manufactured.

They *guarantee* that every barrel or bushel they sell contains 66 *per cent of night soil*, and point to a reputation of ten years standing, as well as to the heavy outlay of capital in their business, as in some sort a surety against imposition.

Considering *night soil* as the *strongest ingredient* in their Poudrette, their mode of manufacturing is simply to disinfect and add sufficient vegetable fibre to absorb moisture.

Two barrels ($3 worth) will manure an acre of corn in the hill, planting four feet apart each way. One application is sufficient on good ordinary ground. On *poor* ground a second application is sometimes necessary to ensure a good crop. This manure has advantages in its use over guano or other manures, being the cheapest and quickest in operation. Corn manured with it will grow more vigorously, and mature earlier—while the yield is heavier in proportion.

Four bushels struck measure, are packed in a barrel. It will be sold at the following prices, *delivered in New-York* free of cartage or other expense: 1 bbl. $2—3bbls $5, 7 bbls. $10.50, and at the rate of $1.50 per bbl. for any larger quantity. At the Factory, 25 cents per bushel will be charged. A trial is respectfully asked.

All orders containing a remittance, with directions to ship, will be immediately attended to.

Apply, if by letter, post paid, to The Lodi Manufacturing Co., 51 Liberty st., New-York. March 1.—2t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

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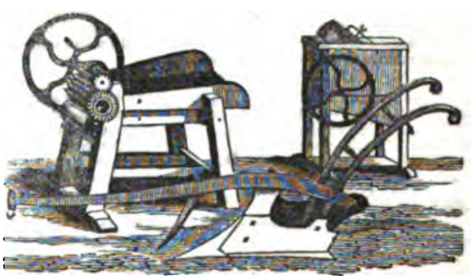
37½ cents per bushel, without package;
60 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 79 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



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United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine the stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order

New-York, Oct. 1, 1848.—tf.

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Of all kinds, for sale at the office of The Cultivator.

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BY J. J. THOMAS.

A Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

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EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

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FRESH from the Chinche Islands, for sale in lots to suit purchasers. Farmers will do well to be on their guard, of whom they purchase guano, as much is sold under the name of Peruvian which is spurious, and almost entirely worthless. To avoid imposition, each bag containing genuine Peruvian Guano, will bear the brand of A. B. Allen & Co., Agricultural Warehouse, 191 Water Street, New-York.

Also Bone dust of superior quality, at 40, 50 and 55 cents per bushel. Poudrette, Plaster of-Paris, Lime, and Patagonian Guano.

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Removed to 369 Broadway.

THE ALBANY AGRICULTURAL WAREHOUSE having been burnt in October last, and with it nearly the whole stock of Implements and Seeds, the subscriber has removed to the new and spacious store, No. 369 and 371 BROADWAY, where he is now prepared to supply all orders for Improved

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Of which he has an entire new supply; and with increased facilities, and a better location for business, he solicits a continuance of the liberal patronage thus far extended to the establishment.

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WARRANTED good, and sure to grow if managed according to the directions furnished to purchasers, for sale. Price $25 per bushel, $7 per peck, or $1 per quart; Payment to accompany the orders. Packages can be sent by express during winter, via Cleveland, Buffalo, &c., or via. Wheeling, Baltimore, &c., or via Cincinnati, to all places on the Ohio and Mississippi rivers.

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Early Potatoes, Polish Oats,

SPRING Wheat, Rye, Barley, Seed Corn, various kinds, for sale at the Albany Agricultural Warehouse.

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SHRUBBERY, Buckthorn and Osage Orange Plants, of one and two years' growth, Strawberry Plants, Grape vines, &c. &c. for sale at the nursery, corner Delaware turnpike and Morton St. Albany.

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Albany, April 1, 1849 —2t.

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Described page 190, Am. Journal of Agriculture and Science.

THE subscribers offer for sale this spring, trees of the above new and choice variety of Cherry so much sought after by the admirers of this choice fruit. Price $1.

Also, their usual supply of

FRUIT TREES

viz: Apples, Plums, Pears, Peaches, Cherries, Apricots, Quinces, extra size. European Mountain Ash, and other Ornamental trees.

A liberal discount made to those who purchase in large quantities.

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Fruit Trees for Sale.

THE subscriber has for sale this spring, a large and fine lot of the

GOLDEN APRICOT TREES,

Which he will sell as low as the same kind can be bought elsewhere. Also, a large and general assortment of Fruit Trees Grape Vines, and Quince Bushes; among which are several thousand of the Frost Gage Plum trees.

Trees taken up and packed in the most careful manner.

An agent will be sent through the Erie canal at its opening who will safely deliver any packages of trees as directed.

CHARLES DU BOIS
Fishkill Landing, April 1, 1849.—1t.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

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LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

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ADVERTISEMENTS—The charge for advertisements is $1, for 12 lines, for each insertion. No variation made from these terms

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

New Series. ALBANY, MAY, 1849. Vol. VI.—No. 5.

Improvement of the Soil.

Treatment of Sandy Soil—Use of Clay, &c.

Eds. Cultivator—Circumstances have particularly attracted my attention to the nature and cultivation of sandy soils. I am satisfied by observation and experience, that a very false and mistaken system of tillage has been adopted upon these lands, and that there prevails an inadequate appreciation of their value and productiveness. The preliminary processes, by which they are in popular language subdued, and adapted to profitable culture, are somewhat tedious and expensive.

The leaves, foliage, and other deciduous particles, that fall from the pine trees which ordinarily occupy these lands in their primitive state, must be first destroyed. These substances are most noxious and destructive to vegetation, and scarcely no useful plant can be cultivated, while they exist to any extent upon the surface of the soil. This work, should be, and usually is effectually accomplished by the burning, which succeeds the first clearing. A fire that burns over the whole surface successfully purges the soil from this obnoxious influence. Where the earth by this process is well prepared for the drag, a valuable crop of rye or oats may be obtained, which will prove an ample remuneration for the subsequent labor and expenses to which I shall refer. If the burning has not effected this result, the farmer must be contented with light crops, and scanty and coarse grasses, until the decay of the roots and stumps, (which is a rapid process with the pines,) enables him to accomplish the object by the plow and hoe. The first clearing is succeeded by a growth of sweet fern, brakes and other worthless plants, by which every valuable vegetable is choked, and ultimately extirpated. This vegetation, we term the sour growth. It is only eradicated by repeated, close and careful plowing and dragging, or what is more efficient still, by the thorough use of the hoe. Sheep and cattle pastured upon the land, have no effect upon this noxious vegetation. They all reject it, and refuse to browse it. Any effort to successfully cultivate with grain or grass, the soil in its presence will lead to idle expense and incur certain disappointment. Until freed from those substances, the land cannot even advantageously be laid down to pasture. Two, and often three efficient plowings are necessary to produce this result. It is not requisite, however, that the plowings should occupy an equal number of years. Repeated use of the plow, is often highly advantageous in the same season.

Nor is the labor and expense of these plowings without beneficial consequence in other respects. The process, if performed at the proper period, at each recurrence, turns under and covers a rank growth of green and juicy vegetable matter, which rapidly decaying, yields to the soil a most fertilising manure. This vegetable substance, when decomposed, becomes incorporated with the sand, imparting new and improved qualities to the land, and forming by the combination, a new element of soil. A farmer, ignorant of these facts, or disregarding them, may be impatient, under this protracted system, and in prematurely forcing the land, often incurs a loss of his toil and money, and will impute to the soil a failure chargeable to his own improvidence.

When, by these operations, the land is sufficiently ameliorated and relieved from this "sourness," it should be well seeded principally with clover. In this condition, it is formed for successful tillage. White clover is indigenous to the soil, and springing up spontaneously, yields a rich and beautiful profusion of herbage. A heavy and vigorous turf is thus soon formed. The land is then adapted to the profitable culture of almost every crop. A tenacious sward, plowed under, gives to the soil a firmness and consistency, that adapts it to the application of manures, and renders their effect more powerful and permanent. The decaying turf constitutes a basis, upon which such appliances as plaster, ashes and lime will vigorously act, and produce large crops of corn, potatoes, or the smaller grains.

My observation has confirmed the opinion, that, by a judicious rotation in culture, sandy soils may be continued without the application of manures, in a constantly progressive state of improvement. Instead of exhausting, tillage tends to its amelioration. The most successful system in my experience is this. Turn under a clover ley, plant upon it, with plaster, after a sufficient harrowing, but without disturbing the sward The second year, carefully seed with clover and herds grass. Let it remain for two or three seasons in grass and then again pursue the same practice. If permitted to remain too long in grass, the land becomes gradually infested with a wild and worthless vegetation.

I will briefly suggest some of the reasons upon which I found my estimate of the advantages of cultivating sandy soils. They may be tilled with an immense saving of labor and expense. A team can plow in the same time, two acres, with less labor and wear, than one acre of stiff or hard land. An equal economy of time and toil, will be observed in every subsequent process, in the tillage of the crop. This is the case when the work is performed by manual labor. The difference in the relative expense of cultivation, is greatly enhanced in favor of the sandy soil, by the use of labor saving machines. In forming a judgment on this subject, this fact should be regarded as of most prominent consequence, for these lands are admirably adapted to the use of the corn planter, horse hoe, and cultivator. Grain grown upon sandy soil, is proverbially well ripened and heavy in weight. Potatoes raised on it, are uniformly, I believe, exempt from disease, and always of the choicest quality. It is less affected by drouth than many other varieties of land. I impute this fact to its being peculiarly pervious to moisture, from its loose and detached particles, which renders it more readily affected by the slight showers and copious dews of summer.

It is well calculated for pasturage. The delicate white clover, which I have described as a natural product of this land, affords the richest and most nutricious pasture. Sheep will thrive and grow fat on a sandy pasture, where a casual observer would doubt that they could find the most scanty sustenance. Sand is ready for cultivation as soon as the frost is out, and crops are growing upon it, when heavier lands still lie unprepared for the plow.

Permit me for a few moments, to occupy your columns in exhibiting a fact or two, which illustrates the advantage of combining clay with sand, and throw, I think, some light on the great question of the nature and causes of the potato rot. I planted in the year 1847, a ten acre field of sandy land to corn, with no application of manure except plaster and ashes, in the hill and upon the plant. Nearly the whole field yielded me a rich harvest. About twenty years before, my father had spread forty loads of clay on three-fourths of an acre, in no respect superior to the remainder of the lot. Upon that three-quarters of an acre, from the first appearance of the shoots to the harvest, the difference in the aspect of the crops was so marked and peculiar, as to attract universal observation, and constant inquiry as to the cause. The plants throughout the season, presented a higher and better color, a more luxuriant growth, and in the end, a much heavier yield, than any other section of the lot. The strength of any other manure, would long before have been exhausted, or its effect lost by leeching or evaporation. The clay combining with the sand, had constituted a new and distinct soil, improved over both its components in fertility, and permanent in its character.

On one side of the field of corn I planted two rows of potatoes, perhaps a hundred rods in length. When dug, they proved sound and free from disease, except across the piece where the clay had been deposited. Here the rot exhibited itself, and had seriously affected the crop. The seed was precisely similar, and the earth in every particular the same, except as it had been changed or modified by the incorporation of the clay with the sand. Can philosophy form any other deduction from these facts, than the conclusion of common sense, that the clay caused the development of the disease in that portion of the crop. It may have caused the development, without being itself the origin of the disease. W. C. W. *Port Kent, Jan.* 1849.

Note.—Although potatoes have generally suffered less from the rot on sandy soils, than on those of tenacious character, they have not been wholly exempt in the former case. As to the quality of potatoes produced on sandy soil, we think they are not usually as good as those grown on a friable loam. Eds.

Fertilising Properties of Salt.

Eds. Cultivator—There is a discrepancy of opinion among those who have used this article as a manure. While some are loud in its praise, and attribute to it astonishing effects, others are equally vehement in its denunciation—asserting that it is incapable of producing any benefit. From these contradictory accounts, we may reasonably conclude that, under some circumstances, it acts beneficially, and under others does not. But *what are these circumstances?* This is an important question, and one which I shall not attempt to answer fully—my chief object being to advance a few remarks which may tend to call attention to the subject, and lead to further investigation.

One of the circumstances under which salt has been found to be productive of *no* benefit is, when it has been used on land situated near the sea. This is easily accounted for when we consider that the vapor which rises from the salt water is impregnated with this substance, and wafted over the land until it becomes condensed, when it is precipitated to the earth in the form of rain. Thus, land bordering on the sea, is kept well supplied with salt, so that the application of an additional quantity would not be likely to produce any beneficial effect.

But *why do its effects vary when it is used on land lying beyond the reach of sea vapor?* I suppose the principal reason is, because some lands naturally contain more of this ingredient (or its constituents) than others. We may therefore always expect most advantage from the use of salt on such soils as have not received a very bountiful supply from the hand of nature, or such as have been exhausted of the constituents of this article by the continued cultivation of such crops as require a large amount of them.

As regards the manner in which salt acts in promoting the growth of any vegetable, I hardly think we are warranted in giving it credit for so many modes of doing good as some have imputed to it. One writer says, "its benefits are as follows: 1st. When used in small quantities it promotes putrefaction. 2d. By destroying grubs and weeds. 3d. As a constituent or direct food. 4th. As a stimulant to the absorbent vessels. 5th. By preventing injury from sudden transitions of temperature. 6th. By keeping the soil moist." The *third* reason here given appears to me to be the most important one. True, salt may "destroy grubs and weeds," but in order to obtain this advantage, would it not be necessary to apply so large a quantity as to be ruinous to any crop we might wish to raise? In this case, the remedy would be worse than the disease. As regards its "promoting putrefaction,"—"stimulating the absorbent vessels"—"preventing injury from sudden transitions," and "keeping the soil moist," these are points which need better evidence than mere assertion.

That salt may be of much advantage by furnishing food to plants, appears very probable when we consider that all our common cultivated plants require for their nourishment, a portion of its constituents. These constituents are *sodium* and *chlorine*. Although these ingredients form but a small part of the bulk of any vegetable, yet they are absolutely necessary, and if the soil does not contain them, our crops cannot thrive, although all other circumstances are favorable. Therefore, when our land has become exhausted of these ingredients, and possesses all other requisites for sustaining a luxuriant growth, a wonderful effect may be expected from the application of salt.

Another circumstance which tends to confirm the position here assumed, (that its chief benefit consists in supplying food,) is, that it has been found by experiment to act most advantageously on such plants as contain, according to accurate analysis, the largest amount of one or both of these constituents (sodium and chlorine.)

One of my neighbors says he has frequently tried the experiment of rolling his potatoes in fine salt before planting them, (having first moistened them with water,) and has invariably found those thus treated to grow more vigorously than those not salted; the vines of the former, he says, are of a darker color, and continue green and growing much longer than the latter, and the yield is always in favor of those to which the salt was applied. He supposes salt to be a certain preventive of *rot*. I would like to know whether any one who has applied this article to his potato crop, has had his potatoes injured or destroyed by the mysterious disease.[*] I have read in agricultural journals several accounts mentioning that potatoes to which salt had been applied, had escaped the disease, while those by the side of them which had received no salt had been destroyed. I have never made any experiments with this article, though I design doing so the coming season.

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[*] There have been numerous accounts, several of which have been published in The Cultivator, of salt having been applied in various forms to the potato crop, with no effect to prevent the rot or "disease." In respect to the effects of salt as a manure, statements are contradictory, and more accurate experiments are necessary. Eds.

The best and safest way of applying salt, I suppose to be to scatter it over the ground broadcast after plowing and before harrowing, at the rate of from three to five bushels per acre. Some recommend double this quantity. The experiment is easily made, and the expense of trying it on a small scale is trifling. I hope the merits of this fertilizer may be more fully tested. If the application of three or four bushels to the acre does no good, I think we can safely say of it, as of homœopathic medicine—*it will do no harm*.

Should any one who reads this article, be capable of giving further information on this subject from his own observation or experience, I hope he will do so. J. M'Kinstry. *Greenport, Columbia Co., N Y, March* 15, 1849.

How to make Manure.

Eds. Cultivator—Perhaps there is no branch of agriculture more open to improvement than that of making and applying manures. Although we occasionally find a farmer who thinks he knows enough without learning anything new, yet the best farmers,—those who have made the most improvement,—tell us they have but just begun to learn. They regard manure-making as an *art* to be *studied;* and are ever ready to learn by reading, by observation, and by experiment.

There is no doubt that farmers in Vermont, will find it for their interest to turn their attention, more generally, to manure-making;—for, whatever may be said of the fertility of other regions, there can be no question but our soil needs manure, and must have manure, or become barren and worthless, as much of it is fast becoming so already.

But the farmer sometimes objects, that it costs so much to make manure, he cannot afford it. This, we think, a mistake, especially where the farmer owns the land he cultivates. The art of manure-making, like the art of house-keeping, consists very much in saving; and there can be no doubt but a large share of the farmers, either for want of information or proper care, suffer one-half their manure to waste. A few months since, we saw, in a neighbor's barn-yard, some half-dozen heaps of green manure, which the owner said he was going to spread over his yard, that it might lie through the summer and *mull*. He was of the opinion that manure was best after it was thoroughly *mulled*. About as good economy as it would be to leave ashes exposed to the weather for a year, and then expect to make soap or potash from them.

Many farmers, if they wished to have as little manure, and that little as weak as possible, could not manage their yards better for that purpose, than they now do. The urine, which is of about the same value as the solid manure, is oftentimes nearly all wasted, and the droppings of the cattle are left scattered about, exposed to the weather, till two loads have hardly the strength of one, and are as much diminished in quantity as in quality.

The barn-yard is often so constructed that the water runs out of it, and in times of rain, perhaps through it, into the road, or some stream near by; and that stream, loaded with juices from the barn-yard, is suffered to run off, when it might, by plowing a few ditches, be turned over the mowings. In one instance, we knew a man, when building a wall on some land he had bought, fill up the places where the water had been accustomed to run through, because he did not want the trouble of ditches, and of having the dirt washed on to his grass. The trouble of ditches and dirt he saved, and, also, the trouble of cutting more than about half the former crop of grass. While such a system of manure-making, or rather *manure wasting* is so common, is it not quite obvious that much may be done by way of improvement, with very little expense?

1. It should be constantly borne in mind, that the most valuable part of the manure, in the farmer's barn-yard, consists of salts that are liable to be washed away by the rains, and of gases, that will evaporate if exposed to the atmosphere; consequently, what manure the farmer has, not designed for immediate use, should be kept heaped up, and if possible, sheltered, so as to protect it from the action of the rains and sun. Is there not a great deal lost by neglecting to do this?

2. If farmers have manure they wish to ferment or *mull*, they can cover it with muck, loam, or something of the kind, so that the gases that escape in fermentation, may not be lost in the atmosphere. And the more surface the manure occupies, the more important it is that it should have a covering or something mixed with it, to prevent the escape of the ammonia.

3. Farmers may save a great deal by fixing their yards, so that the wash will not all run out. Mr. A. is greatly averse to having his yard wet, and to prevent this, he has the middle the highest, so that all the wash, and all the rain that falls into it, run into a little brook just below, and thence, on to his neighbor B.'s mowing, who saves all the wash he can get, by having ditches in all directions. Mr. A. has a clean, dry yard, and can go through it without dirtying his boots; but his neighbor B., who has his yard constructed differently—like a basin, "right side up with care,"—makes more manure, and raises much heavier crops. Cannot farmers attend to this without much expense?

4. A great deal may be saved by taking care of the cow-yard in the summer. This should always be covered with something to absorb the urine, and the droppings should either be covered up where they are left, with muck or loam kept in heaps about the yard, or be thrown into a heap with the shovel, and then covered, to prevent drying up. It is no exaggeration to say, that when the cow-yard is left without any care, two-thirds of the manure is wasted. Farmers, is not this too much to lose?

5. Much may often be done in turning the wash of roads and buildings upon the mow-lands, by having ditches wherever there is a chance for any wash. Frequently, a few hours work in plowing ditches, would make tons of hay; and with but trifling expense, the whole crop on many acres might be doubled; yet the owners, while they complain of "light crops," and oftentimes are compelled to buy hay to winter out their stock, say they cannot afford to make manure!

6. We not unfrequently see all the soap-suds, and wash from the house thrown into the door-yard, making a mud-hole which breeds swarms of flies, and fills the air with its pestiferous effluvia. In such cases, farmers might profitably save their soap-suds for manure, and as for the *odor*, that of a fragrant bed of flowers would be quite as *agreeable*, as well as more healthy and profitable.

The importance of saving the wash from the house can hardly be too highly estimated. A few years since, a British Agricultural Society, offered a premium for the best method of making compost manure. The successful applicant obtained his method of an Irishman. He examined every potato patch he could find; and in one large field, cultivated by many different families, he found one patch of very luxuriant growth, and more promising than any other. He inquired of the owner whether he did not keep more stock than a cow and pig, but found to his surprise that he kept neither cow nor pig. He had a pit dug, where he threw all the wash from the house, mixing it with straw, turf, scrapings from the road, and whatever he could get that would work into manure. This pit, frequently emptied and re-filled, constituted a little manure factory that produced the best potatoes in Ireland. Farmers, is not here an opportunity for making much manure, with materials that have for a long time been thrown away?

7. Of all sources of manure-making, hogs are the most profitable. Those who have barn-cellars for their hogs to work in, can turn their labor to the best account, but those who have not, may, without expense, have a small yard attached to the hog-pen, and every few days throw in muck, loam, turf, leaves, weeds, or anything of the kind that may be at hand. The hog-yard, to be profitable, should be frequently attended to; when considerably filled, it should be emptied and supplied with new materials. Hogs, if rightly managed, would never be censured for laziness. They have unjustly been accused of this, simply because, like mankind, they will not work, unless they can work in their *own way*. To be sure, when they have "accumulated" a good deal, they like to "retire from business," and become "gentlemen of leisure;" but while in the "vigor of life," they will do a good deal towards "a living," if provided with the means. As they are "fond of new things," they should frequently be supplied with new materials to work upon; and if this is faithfully done, farmers may rest assured, their hogs will dig more money for them than many of the *California gold-diggers* will ever realise. JOHN TUFTS. *Wardsboro,' Vt., Jan.*, 1849.

Sketches of Farms.

Further Sketches of Mr. Phinney's Farming.

EDITORS OF THE CULTIVATOR—In the April and May Nos. of *The Cultivator* for 1848, I gave an account of a visit to Mr. PHINNEY'S farm, at Lexington, Mass., in January previous. In September last, I had the opportunity of observing some of his fine crops,—the result of his mode of operations. And first,

THE ORCHARDS.—The trees in the Baldwin orchard, for productiveness, deep verdure, smoothness of bark, and fine shape and proportions, presented a very remarkable appearance. One could hardly conceive how the trees could possibly bear more fruit. Although many of the limbs were bent nearly to the ground, under the burden of apples, yet not a prop was seen in the orchard,—the horizontal training of the limbs, of which I have before spoken, effectually preventing them from splitting off. Mr. Phinney was expecting to harvest nearly 1000 barrels of the Baldwin apple from this orchard, which he intended to ship for Liverpool, on his own account. The fruit for market is carefully picked from the trees by hand, and immediately put into the barrels, which are stored in a dry cool cellar, built for the purpose, in the orchard, where they remain until a sale is effected. No windfalls are ever suffered to go into the barrels. Hence, his apples command a ready sale, and a much higher price than ordinary apples, put up with less faithfulness and care.

Mr. Phinney formerly had a great many varieties of fruit in this orchard; but quickly perceiving that the Baldwin apple found here by far the most propitious soil, he turned his attention almost exclusively to the cultivation of that variety. He finds that the great point to be considered, *pecuniarily*, in fruit-raising, is, —Of the most approved varieties, which will flourish in greatest perfection, in a given location and soil?—The young sweet-apple orchard is coming into bearing finely, and is a great pet with Mr. Phinney. Here, too, it is found that one or two varieties are worth all the rest for productiveness and profit. The orchard has an eastern slope, the limbs are trained in strict accordance with Mr Phinney's notions, and the trees are very thrifty and vigorous.

CULTIVATION OF CARROTS.—In front of the new house, I noticed a remarkable field of carrots of one acre. The cultivation of the ground had been preparatory to laying it down as a level and permanent grass plat. Twenty loads of compost were spread upon the sward last spring, and turned under to the depth of six inches, and the subsoil plow following in the furrow, loosened the earth ten inches deeper. Twenty loads of compost were then spread on top of the sod furrows, two or three inches of the surface made perfectly fine and mellow with the harrow, and early in June, the seed was sown with a machine, in rows two feet apart. At the time of my visit, the carrots had made most vigorous growth, the tops so completely covering the ground that the eye could not at all distinguish the rows. Knowing well the fact that this crop makes its principal growth of root after the twentieth of September, I will not state the probable amount of bushels to be harvested from this field, as it might sound like a large story. Suffice it to say, that any reasonable man should be satisfied with the like of it. The decomposing sod, underneath, was in time for the carrots; and together with the manure turned under, perfectly sustained the crop, in the latter part of its growth; it also kept the land light and mellow, permitting the roots to penetrate and range about at pleasure. The loosened subsoil invited them still farther below. The white carrot was sown upon this field. Making a good part of its growth above ground, it is the more readily harvested without disturbing the sod; and as Mr. Phinney intended the field for a lawn, he was anxious to preserve the surface level and smooth for receiving the grass-seed.

In my ignorance, I had always supposed, until last season, that old land, as it is called, was the only suitable preparation for growing the carrot. I am now well convinced of my mistake. One of my neighbors last spring sowed a piece of green-sward land on the same day that I sowed a piece of strong fertile old land. The seed for both fields was out of the same lot, and the land thoroughly prepared, in both cases. We frequently compared notes during the progress of our crops, in order to test the merits of a green sward ley for the carrot; and the result was, that my neighbor's crop yielded nearly a third more than mine, while his expense in hoeing and weeding, was one-half less. It seems surprising to me, that the carrot is not more universally raised by our farmers. It is a clean, pretty root to handle; as winter feed, nothing is more grateful to the taste, or promotive of the growth and thrift of cattle and horses; for milch cows, it exceeds any other mess-feed for producing sweet, yellow butter; and if the ground is properly chosen and prepared, it makes a very profitable return for the labor bestowed.

THE GRASS LANDS.—In my former notice of the reclaimed grass-lands, I omitted to speak of the importance of an open space, of 3 or 4 inches square, on the bottom of the drains. If stones of sufficient size are at hand to cover this channel, the rest of the filling may be of small stones, as the water will readily find its way into the open space below. The ten-acre piece of drainage, which I noticed in a former communication, proves a most judicious and profitable investment—the land having given fully three tons per acre, of excellent herd's-grass and red-top hay, the past season. The situation of the field is such as to receive all the surface wash of many acres of highly cultivated land, gently descending towards it, on either side,—the benefits of which are now fully secured and turned to the best account,—which, with an occasional top-dressing of compost manure, will undoubtedly keep the land in produc tive mowing, for an indefinite period of time. Twenty acres of upland mowing, adjoining this field, have given an equally large amount of hay; and the crop, the past season, on both fields, is estimated at 90 tons.

The process of underdraining and bringing into successful cultivation, 20 acres of bog meadow, I have spoken of before. This meadow is now very productive in grass; and judging from the luxuriant appearance of the aftermath, the quality of the hay is good. As the cultivation progresses in age, the meadow becomes more firm and easily passable with loaded teams, and the quality of the produce more valuable. Mr. Phinney has raised on this land, 75 bushels of corn, 500 bushels of potatoes, or from 4 to 5 tons of hay, at a first and second cutting, to the acre; and this, in contrast with the fact that, twenty years ago, it was a perfect quagmire, would seem to show the merits and value of this kind of farming.

As the orchards now occupy so large a portion of the farm, and being kept in constant tillage, afford about all the proportion of hoed crops that is desirable or necessary to raise, Mr. Phinney wishes to keep as much as possible of his remaining tillage-land in productive mowing, in order to furnish hay sufficient for the wintering of his numerous stock of cattle. Consequently, the above-named grass-fields will be permanently kept so, by frequent top-dressings of well-rotted manure; and should the land at any time cease to yield at least 2 tons of hay to the acre, or should the quality of the produce become inferior, it will be turned smoothly over, manured and re-seeded to grass, without other cultivation.

In addition to the large amount of hay which the farm cuts, it also supports 70 head of cattle, through the summer, with green feed, or by soiling them in the barns. All the corn necessary for home consumption is produced on the farm, as well as any quantity of carrots and ruta bagas for the winter-feed of the stock, and a great variety of green vegetables for Boston market.

Manure.—These results have been realised in twenty-five years, by agricultural skill, and a diligent and strict husbandry of every available means, for making manure. The peat from the bog meadow has been analysed by Dr. Jackson, and found to contain 95 parts in 100 of vegetable matter. But this, in its cold and raw state, is unavailable, because its valuable properties are locked up in acids, hurtful to vegetation. It has therefore been placed behind the cattle, in their stalls, and in the hog-pens and cellars, as an absorbent of the liquid and gaseous portions of the manure, which in turn, expel the acidity from the mud,—thus rendering it a principal and valuable resource in the improvement of the farm. As much as two parts of peat, are incorporated with one part of manure; and Mr. Phinney does not hesitate to pronounce it fully equal in its effects upon all the crops in the rotation, to an equal amount of ordinary farm-yard manure.

Every animal has an opportunity of contributing its full share in the formation of a circulating medium for the farm, by depositing its *manure*-treasures in a *Farm Bank*, well guarded from leakages, or the stealthy pilferings of the atmosphere,—often so dexterously managed, as to rob the unsuspicious and unguarded farmer of un-told treasures, even in broad day-light. It has never been thought advisable to extend, or *sprinkle* the business of this bank over a large territory, exposing it to the risk of heavy losses, both of principal and interest, but large and responsible loans have been made, nearer home. Its redemptions have, therefore, been easily met, by the proceeds of its bills receivable,—the produce sold. The dividends have been large and regular, with "a wide margin" left, for expenses and contingencies.

The Stock.—The imported stock of the Mass. State Society, which is kept on this farm, was looking finely at the time of my visit. All the stock of the farm appeared to be in high health, under the soiling system of feeding; the cows were giving a fine quantity of milk. They have twenty acres of pasture to range upon for exercise and water, a few hours each day. The young animals of the Ayrshire and Devonshire breeds, had made a rapid and vigorous growth in the interval of my visits. These breeds of cattle are highly esteemed by the farmers of Massachusetts, for their hardiness and adaptation to the climate and soil of that State. The introduction and dissemination of this stock, by the State Society, is a wise and praiseworthy movement; and it will be productive of more real wealth, to the farming interest of the commonwealth, than any other appropriation of money the Society has yet made.

The task of redeeming this farm from its worn-out condition, and of removing the stones and other obstacles to good cultivation would have looked too formidable for ordinary farmers to attempt. Not so with Mr. Phinney. He was satisfied that its close vicinity to a large market, and the payments which a naturally willing soil would be encouraged to make on behalf of a generous cultivation, after the obstructions were removed, warranted him in the undertaking. At the end of twenty-five years, he can survey his labors, and the results produced by them, with much pride and pleasure. His grateful soil now gives a large and sure reward for the enterprise, patient industry, and liberal investment, heretofore bestowed.

I apprehend that the contrast between the results of a judicious system of high farming and the ordinary scrub and skin system which too commonly prevails, will always be in favor of the former, in a run of years. Too many of our farmers are opposed to any and all changes of cultivation which look toward the improvement of a worn-out soil, on the ground that *it costs too much*. Trained up in old customs of husbandry,—which might possibly do for a time, while the land was new, and the population thin, they still adhere to those customs, under circumstances entirely different from those which gave them origin. When the undeniable superiority of the different modes of culture, better adapted to *present* circumstances, is held up to view, even in the light of *dollars and cents*, their adoption is still regarded with much suspicion and contempt. Controlled by this blind prejudice, how often do we see them toil on through life, in the old routine, their farms becoming still poorer, each year.

But happily, a spirit of improvement is abroad. Among quite a large class of the old stock farmers, a desire for information in different and better modes of culture, is rapidly obtaining. A large, intelligent and enterprising class have gone to farming, within a few years, from other business, who,—dissatisfied with old and improvident methods,—at once inquire into the principles of an enlightened husbandry, with minds free from traditional prejudices. These two classes are scattered along in every community, and we see that their example is exerting a salutary influence upon our agriculture.

The improvements in farming we now observe, may be principally ascribed to a wide diffusion of the desired information, through the medium of Agricultural Journals. The talented Liebig justly remarks that—"There is no other profession which can be compared in importance with agriculture, for to it belongs the production of food for man and animals; on it depends the welfare and development of the whole human species, the riches of states and all commerce. There is no other profession in which the application of correct principle is productive of more beneficial effects, or is of greater and more decided influence." Great and good influences have already been largely imparted, in combatting and meliorating ancient customs, while the mass to be influenced, were almost impenetrably be-clouded by prejudices in favor of those customs. *Now*, there is a great accession of enlightened and *willing* minds to operate upon. You have then, Messrs. Editors, every encouragement to persevere in your enterprising and noble efforts to disseminate correct and improved principles and methods of husbandry, with the consciousness that you are conferring not only individual, but *national* benefits. F. HOLBROOK. *Brattleboro', Vt., Feb.* 7, 1849.

History of Kentucky Cattle.

Letter from Dr. Martin.

The following is the letter to which we alluded in our March No., embracing the questions we addressed to Mr. SANDERS, and Dr. MARTIN'S reply to the same. The letter was originally sent to Mr. S., and was forwarded by him to us. EDS.

DEAR SIR—Your letter of the 25th ult. is just received, and I will try to answer your inquiries. Your first question is,

"1st. What breed, cross, or variety [of cattle] has been found most profitable in your region, for beef; and what for the dairy ?"

The improved Short Horns and their crosses are most profitable for beef. They are of large size and fatten easily at any age, so as to come early to maturity, and they carry a large portion of their flesh upon the best parts, and their beef is of an excellent quality. They pay better for food consumed than any other cattle that I have fattened or grazed.

In regard to the milking qualities of the improved Short Horns, there appears to be much diversity of opinion. Some contending that they are the best milkers we have ever had in the country, and others that they are worthless. The truth is that some tribes of Short Horns are remarkable for the quantity of milk they give, and other tribes are equally so for their *small* yield.

I purchased two cows at Col. Powel's sale in 1836. One of them, a cow of the Daisy tribe, was a steady milker, giving from twenty-eight to thirty-two quarts of milk daily. The other was scarcely able to raise her calf. And the qualities of each have been transmitted to their descendants, for several generations. The cows that I imported from England were all fine milkers, and so are their descendants. The cows of those milking tribes are generally thin whilst giving milk, but fatten very quickly when dry. The steers of the milking tribes are equal and generally superior as grazier's stock to the others. Mine have been superior, which I attribute to their having been better nourished by their mothers.

"2d. Which of the breeds imported in 1817, the Long Horns, or Short Horns, have succeeded best ?"

There was a close contest for many years between the Long Horns, Short Horns, and Herefords. Each had their advocates, and each produced a stock that was a great improvement as grazing stock, upon the native and Patton stock, (as the old unimproved Short Horns introduced by Mr. Patton, were called.) This contest was kept up until about 1830, when the advocates of the Short Horns became most numerous. The Long Horns and Herefords were gradually bred to Short Horn bulls, until the pure breed of the two former are nearly extinct.

"3d. How do the Long Horns of that importation, [1817] or their descendants, compare with the Patton Long Horns ?"

Mr. Patton was one of the original importers in 1783 of two breeds of cattle. They were then called the *milk* and *beef* breed. The milk breed were Short Horns. The beef breed had longer horns; but I have always supposed they were the unimproved Herefords.[*] I am not aware that there ever was brought to Kentucky, any of the full bred beef breeds, so that my opinion that they were Herefords is based upon the appearance of the half bloods which I have seen. Mr. Patton brought to Kentucky the full bred milk breed and half blood cows of the beef breed. A son of Mr. Patton brought to Kentucky a half blood bull of the beef breed, and Mr. Smith brought also a bull, which was half beef and half milk breed, called *Buzzard*. Mr. Patton's Short Horns were very fine animals. They were fine boned, heavy fleshed, and came early to maturity, and fattened kindly, and were extraordinary milkers. They were much larger than cattle that we had in the state previously. Mr. Patton brought only one cow of this breed, and she had no female descendants. The produce of these fine cattle was very much injured by breeding them to bulls which were descendants of the beef breed, such as Inskeep's *Brindle*, and Smith's *Buzzard*. These cattle produced a large, coarse, big-jointed stock, that came slowly to maturity, difficult to fatten, but when fully grown were of enormous dimensions.

This was the state of things in 1817, when your importation of Short Horns and Long Horns was made. I remember, well, examining the Long Horn bull (*Rising Sun*) soon after Messrs. Cunningham & Co. bought him, and I then thought him the finest animal of the ox kind I had ever seen. His stock was very fine—vastly superior to the coarse stock above described. I sold a cow, (got by *Rising Sun*,) to a butcher who paid me for a thousand pounds, nett meat—a very unusual size for a cow in those days.

"4th. How do the Short Horns, imported in 1817, or their descendants, compare with those that have since been introduced, including those of the Ohio Importing Company ?"

The Short Horns of 1817 were fine boned, heavy fleshed animals, that came early to maturity, and fattened much easier than the Patton stock, (especially after the latter had been mixed with the beef breed.) They fattened mostly on the outside, so that they always showed their fat to the best advantage. Their flesh was rather inclined to hardness, which was a considerable drawback upon their excellence.

The *best* of the improved Short Horns, introduced within the last twenty years, have all the good qualities that the stock of 1817 had, and they have these additional advantages:—Their flesh is soft, [tender] and they throw a portion of their fat in among the lean, o as to marble it. The beef is of a better quality and hey take on fat much easier. They are as forward at hree years old, as the stock of 1817 were at four, or as the Patton stock were at six. But the later importations have had greatly the advantage of the stock of 1817, in having the improvement made by the latter to start with. Some of the finest animals I have ever seen fattened, were a mixture of the two breeds. I hink there were some of the importation of 1817 that did not have that hardness of flesh, but they soon became so mixed in their descendants that it was a general characteristic.

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[*] The terms "beef breed" and "milk breed," seem to have been used to designate varieties of cattle which were respectively distinguished for milk and beef—the particular breeds to which they belonged. not being generally known at that day. The "Patton stock" appears to have been of two different breeds, both of which were obtained by Matthew Patton, from (or through) Mr. Gough. of Maryland, who is said to have been "an importer of British cattle." Those first obtained. are described by Benjamin Harrison, a grandson of Mr. Patton. as long-horns—the cows, he says, had "*very long* horns." In 1795, several years after the cattle just named had been obtained, Mr. Patton. it is said. "procured from the before-mentioned Gough, a bull called *Mars* and heifer called *Venice*" [Venus ?]. These are represented as "full blood English cattle," and appear to have been Short Horns. [See Judge Beatty's work on "Practical Agriculture." pp. 33, 34—also, Mr. Harrison's account in the Franklin (Ky.) Farmer." vol. ii. p. 196.] The Mr. Gough alluded to was probably an importer of *various breeds* of "British cattle." In Parkinson's "Treatise on Live Stock," the author of which spent several years in America shortly after the close of the Revolutionary war, Mr. Gough is spoken of as having imported "cattle of the Yorkshire kind." It is added—"they were of the large, coarse sort." and that "they answered very indifferently in America." the poor quality of their flesh rendering them disliked by the butchers. [See "Parkinson on Live Stock," vol. i. p. 108.] We have seen what was called "Patton stock" in the neighborhood of Chillicothe, (O.,) and also in Kentucky. They appeared to be a mixture of long horns and short horns, and (with due deference to Dr. Martin) we did not discover in them any points denoting Hereford blood. EDS.

“ 5th. If you were now to choose a stock for general grazing purposes, in your state, what breed or breeds would you select from ?”

I should have no hesitation in preferring the improved Short Horns, to every other kind of stock that I have ever seen, for grazing in this region of country.

“ 6th. Give as full a description as you can of the qualities of each breed, as they have been developed with you, embracing remarks on the comparative size, form, activity, hardiness, and tendency to disease of the different breeds.”

The original breed of cattle in Kentucky, strongly resembled the old unimproved Devonshire cattle. They were small, thin and difficult to fatten—cows weighing when fat, from three to four hundred pounds. These cows were good milkers, giving a moderate quantity of rich milk. I do not know that they were subject to any other disease but the hollow horn—a disease brought on by poor keep in the winter, so that the pith of the horn is frozen. It was cured by boring a hole in the horn.

The introduction of the Patton stock in 1785 and subsequently, made a considerable improvement in these cattle. Cows of the Patton cross, would weigh when fat from 600 to 700. There was such a general disposition to increase the size, that the coarse-jointed large-boned animals, were selected and saved as breeders, generally, from 1785 to 1817, and the consequence was at the latter period, the Patton stock, (as all these cattle were called,) were very coarse. The size of some of these cattle was enormous; but they did not weigh, nett, near equal to their size. The graziers at that period did not like to attempt to fatten cattle until they were four years old.

The importation of 1817, improved the coarse cattle very much, increasing their disposition to fatten. They came earlier to maturity, were gentler, better disposed, and had much less offal. Whatever reputation the Short Horns acquired in Kentucky, prior to 1830, was owing to this importation of Short Horns, and they had great reputation.

The improved Short Horns introduced within the last twenty years, have been a great improvement upon those imported in 1817, and those of Mr. James Prentice, of Lexington, in 1818. At the last cattle show that we had in Winchester, I showed a three year old steer, a mixture of the stock of 1817 and the improved Short Horns since introduced; and the judges put his weight at 750 lbs. Shortly after the fair, I sold this steer to Mr. Brinegar, who took him to New Orleans, and when butchered, he weighed, nett meat, 1242 lbs. I mention this circumstance to show how much more weight is contained in the same bulk; for if this steer had been of the Patton stock, his bulk would have given about the weight the judges laid him at. A few months before, I had sold to a butcher in Lexington, a steer two years and eight months old, that weighed 1025 lbs. I sold a heifer six years old to B. Roberts, that weighed when driven to Cincinnati 1487 pounds. Last year I sold to Mr. Horn, a five year old heifer that weighed 1116 pounds. Both of these were mixtures of the stock of 1817 and later importations, and the last was uncommonly small for her weight. I regret that this last was not weighed before she was slaughtered, that I might know the difference between her gross and nett weight. However, I can give you the gross and nett weight of a four year old steer sold to the same gentleman. His gross weight was 2000, and his nett weight 1280 lbs. All these nett weights are exclusive of hide and inside tallow, taken out with entrails.

As it regards the diseases of all the above, they are very few, if bred from healthy stock. The most formidable disease of the improved Short Horns with me, has been the milk fever. I lost two of my imported cows, and one that I purchased at Col. Powel's sale, with it. It chiefly attacks cows that are fat, and have their calves in very warm weather—the attack being in a few days after calving. I never knew any but fine milkers to have it, and not until after they have had several calves. The udder becomes very large, hard and hot. They soon appear to lose the use of their hind legs so that they cannot stand. I have cured some by large bleeding and purging freely with Epsom salts. But prevention is still better, which may be generally accomplished by preventing the cows from having calves in warm weather. Healthy parents, generally produce healthy offspring in this region. You are aware that cattle in most of the adjoining states, are diseased, particularly in the liver. These cattle produce a sickly progeny, which seldom look as well as stock from more healthy parents. And I have noticed calves from them to be very subject to bowel complaints.

“ 7th. What breed of cattle is best for driving long distances ?”

This question is more difficult for me to answer than any of the others, as I have very little experience in driving cattle; but I am told by persons who have been engaged in this business, that the Improved Short Horns, when fattened young, do not stand long journeys well. I should suppose from their make that the Herefords would be the best travellers. The Improved Short Horns make excellent oxen, as they never get overburthened with flesh while they have plenty of hard work to do. The breed is more gentle and docile than any others that we have had. Yours respectfully, Sam'l. D. Martin. *Near Colbyville, Ky., Dec.* 4, 1848.

Improved Implements.

System, Order, and Economy.

Next in importance to the Plow, Harrow and Cultivator, the Seed Sower may claim rank. Until within a few years, our grain and grass seeds have been sown broadcast by hand; hence we have rarely seen a field of wheat, but the irregularity of such sowing is visible soon after it vegetates. There are many incidents which cause this irregularity, such as the state of the wind, requiring either a high or a low cast; the equal and corresponding motion of the hand and foot; the length of step, &c.; from such like causes we often see fields of grain striped and streaked, or in waves, to a greater or less extent; here too thick, there too thin. The consequence of such carelessness is, the crop is not uniform in its growth and maturity, and less in product than if the seed had been well and equally distributed. To make this more evident, a careful calculating farmer ascertained by trial, that one foot square received of equally distributed grain, about 48 grains: Now ears of wheat may be said to average 65 grains, I have counted as high as 91—and as low as 24—but the above named person allowed in his estimate, that each grain produced only one ear, and every ear only 44 grains—the produce therefore, ought to be *forty-*

four fold—but the largest average produce is but 25 fold—then what becomes of the 19 fold lost? May it not be, that the greater portion is lost by *careless cultivation*, and a portion by insects?

To perform the duty of sowing grain, as it should be done, a man can sow twelve acres in a day—but taking one with another, as laborers present themselves to the farmer, very few know anything of this important duty; consequently, we have called in the aid of machinery, not only to distribute the seed equally and uniformly, but to economise too costly labor. This has been well accomplished by the introduction of Seymour's *Sowing Machine*, by means of which a man can sow 22 acres or more per day; and once for all, when I assert results as facts, without qualification, they are to be received as established by my own practice and experience, for several successive years. Thus, with a sowing machine, we can distribute either grain or grass seeds, with a precision which cannot be accomplished by hand; the quantity per acre may be graduated to a quart. The time gained in the operation, and the labor saved, is a profit to the cautious farmer which he carefully cherishes. Let us examine the matter by figures, and note the results.

The hire of a man and horse for two days, ... $1 50
in which time he sowed 44 acres, at a cost of about 4¼ cents per acre.
If sowed by hand with *equal precision*, a man might sow twelve acres per day, requiring 3⅔ days, at $1 per day, ... $3 66

or at a cost of 8⅓ cents per acre—an allowance of the annual wear and tear of the machine may be made, and we have a saving of about one-half of the expense in favor of the machine. The gain of time is very valuable, and the gain in product is considerable, probably not less than five out of the nineteen fold lost to us, as shown in the experiment before stated. Here we have a field for economy in our farming practice but little known, and commending itself to the serious consideration and scrutiny of every farmer.

These seed sowers are not machines of recent invention; they have been known and used for many years in other countries, and to such perfection have they been carried in England, that a seed sower moving at the rate of two and a-half miles per hour, has covered 54 acres in ten hours; their great breadth however, would not be acceptable to the American farmer.

Among the most efficient of our farm machines is the *Hay rake*, worked by horse power; machines of this character were attempted in England about 65 years ago, but it was reserved for the American farmer to perfect the machine. This rake is so universally used, that it needs no remark to call the attention of the farmer to its economy. Within a few years, a horse rake with iron teeth has been introduced, deserving our attention, for raking our stubbles, and all such grain fields as are harvested without binding into sheaves—it works well also in the hay field, when the teeth are well tempered.

We have reason to know that from the earliest period of history, attempts were made to lessen the severe labors of harvesting grain, but the simple reaping hook, or sickle, maintained its supremacy at all times, and until within the last 70 or 80 years;—nor was it until about the year 1815 that any thing promising success was presented to the farmer. At that date, premiums of $2500 were offered in England, for the production of effective *Reaping Machines*. The premium was not awarded, but credit is due to Mr. Smith, of Deanston, for a machine which, though it was approved and used for several years, was relinquished. In 1837, Mr. Smith improved his reaper, but it was too heavy and cumbrous for general use. The necessity for a reaping machine was felt so strongly, that the mechanical genius of Great Britain was severely urged for its production, and machines were produced by Mr. Bell and Mr. Mann, at different periods, and each with promise of success. All however were complex and costly; of course not fitted or suitable to general use, and at this day, the sickle and the scythe are extensively used in harvesting in Europe. Here again, it was reserved for American ingenuity to secure success, and I believe the merit is due to Mr. Obed Hussey of Maryland, for the production of the *simplest* and most effective machine for reaping our grains, that has yet been offered. Other ingenious men have invented in this country, reaping machines which perform well, and have been made by one and the same power, to reap and to thresh the grain—these latter, however, are complex, and require a power for their use, beyond the wants or due economy of the New York farmer. The machine used by myself and many of my neighbors for several years, is the plain simple machine of Mr. Hussey, moved by a pair of horses; its simplicity and durability entitle it to our notice; and indeed it would be well, that in all our machinery, these two qualifications were more closely attended to; for unless a machine is *simple* in its contrivance, it is useless to the farmer, and unless *substantially* made, and strongly braced, there is little probability of its continuance over one season. With Hussey's Reaper, we cut from 12 to 17 acres per day—the average work done is 15 acres per day. It requires one person to manage the team and another to throw off the grain;—eight men to bind the sheaves as fast as cut, are kept in active employment; and the machine costs about one hundred dollars. Here we have all that is necessary to show the economy from this labor-saving machine—let us test it by figures. Taking men as we find them offering to labor for us, very few are capable of cradling more than two acres per day in a workmanlike manner, but to make our calculations more exact, we will suppose them equal to cradling two and a-half acres per day. A field of twenty acres in wheat will then require 8 days' cradling at $1.50 per day, is $12 00
16 days' raking and binding (two binders to each cradle,) at $1, ... 16 00

$28 00

Or $1.40 per acre. If an acre yields 20 bushels of wheat, the reaping, binding and shocking, is equal to *seven cents* per bushel. Then, if the field of 20 acres had been reaped by Hussey's Machine, worked at a moderate pace, it would have been finished in 1⅓ days.

Therefore, the cost of a team and driver at $1.50 per day, is..................................$1 83
8 men binding for 1½ days, at $1 per day,......12 00

$13 83

Or 69 cts. and 4 mills per acre. If the yield, as in the former case, is 20 bushels per acre, then the cost of reaping per bushel, is 3 cents and 4.7 mills; being a gain in favor of the reaper, of about *three and a-half cents per bushel*. The rate of wages may vary in different places, but will not essentially vary the above result. Any farmer can make his calculations from the data set forth, and add a proportion of ten per cent per annum, on the cost of the reaper for its wear and tear, distributing this charge among each of the crops reaped by it; as it reaps equally well, wheat, barley, rye and oats.

I have before me the cost of cultivating, harvesting and preparing 2 different crops of wheat in my neighborhood the past autumn, *ready for market*; the cost of them respectively being 25¼ cents, and 29⅔ cents per bushel; a result of system, order and economy not to be accomplished without the machines we have described.
AGRICOLA. *Seneca Co., April*, 1849.

The Veterinary Department.

Hoove in Cattle.

Eds. Cultivator—Allow me to suggest a *quicker* and much easier way of curing an animal hoved on clover. Take a straw band, with a knot in the middle s large as a man's fist, put plenty of tar upon it, and put it in the mouth of the animal, and tie it on top of the head, not too tight—so that she can chew it. Then put two or three table spoonfulls of the tar in the mouth. This will relieve the animal almost instantly. have cured at least twenty cattle in this simple way, and can cure any one in *fifteen minutes* at most, *with absolute certainty*. If the animal is hooved upon corn or rye chop, [corn or rye coarsely ground, and mixed with cut straw or hay,] I take a pint of lard or half a pound of glauber salts, and drench the bowels with it. have known several cattle to be cured in this way;—but never had but one of my own foundered,—it was a cow fresh in milk. I gave her lard—she soon got better, but lost her milk, and for a week or two gave but little. She lost all her hair; it came off in great bunches. B. M. Ellis. *Muncy, Lycoming Co., Pa., Jan.* 30, '49.

Stretches in Sheep.

In answer to an inquiry made in our March number, we have received several articles in relation to this disease, the most important portion of which we give as follows:

Mr. J. S. Pettibone, of Manchester, Vt., has lost several sheep by this complaint, and from a *post mortem* examination of most of them, he is convinced that the cause is a stoppage by a part of the small intestines being drawn into itself,—constituting what is called introsusception. He states that all he has examined have presented this appearance. He thinks it difficult to cure, unless taken as soon as it can be perceived from the symptoms exhibited by the sheep—if delayed twelve hours, he says the animal may as well be "killed and put out of its misery." His remedy is, to take a sheep as soon as it appears to be affected, raise it up by the fore legs, and move it up and down; then take it by the hind legs and move it in the same way. Then give it from half to three-fourths of a pound of lard, cut up into pieces of convenient size to put down its throat. Then turns out the sheep and gives it a smart run. This seldom fails to produce a cure. Mr. P. is in doubt as to the *remote* cause of the affection. He thinks it often attacks sheep that are in good condition and apparently healthy.

In support of Mr. Pettibone's views, we may add that the editor of the *Berkshire Culturist* agrees with him as to the cause of stretches, and recommends similar treatment. He states that he has also given for this difficulty, "common squirrel shot"—about an ounce to a sheep; though a smaller quantity will often produce relief. A correspondent of the *Michigan Farmer* states that his remedy is "simply driving about the sheep affected with the disease, so as to exercise them somewhat violently."

Mr. C. W. Hillman, of East Avon, N. Y., writes—"We have had more or less of stretches in our flock for the last fifteen years. We have tried all the usual remedies recommended, with little success, till we tried the following: Take a sharp-pointed pen-knife, and make an incision in the third ridge in the mouth, and start the blood pretty freely. This has proved an effectual cure in every case. As a preventive, I would recommend one tea-cupfull of sulphur mixed with eight quarts of salt. Keep it by them from fall till spring."

Mr. Albert A. Doane, of Middle Granville, N. Y., writes—"We have found in most cases, that bleeding at the ear would give immediate relief. We have used, in some instances with good success, gunpowder and rum, in the proportion of half a gill of rum to two tea spoonfulls of powder. We have also tried a strong decoction of thoroughwort or boneset, made sweet with molasses, say half a pint to a dose; followed by an injection of slippery elm bark. From our experience, we have more confidence in this than in the powder and rum. As we are situated where we cannot get pine or hemlock boughs, we tried as a substitute this winter, pulverised rosin, mixed with salt, sulphur and ashes, and have been very successful in its use."

Scours in Sheep.

Mr. Reed Burritt, of Burdett, N. Y., writes in reference to this disease:—"Late in the fall of 1837, the scours got among my lambs, and I was not able to arrest the disease until some forty of them died. At length a friend recommended rennet, prepared the same as the cheese-maker uses it to set a curd for cheese. I accordingly gave to each lamb that was diseased, about four table spoonfulls, and not one of them failed to recover. We then prepared a quantity sufficient to soak a bushel of oats, and fed them in piece-meals to the remainder of the flock, which consisted of about one hundred, and the disease stopped entirely. I have used no other medicine for that disease to this day, and it has never failed of curing. I keep it on hand the year round; but it is seldom called for excepting in the fall, when the grass is frozen. I have not had more than two or three cases a year since 1837. An old sheep needs six or seven spoonfulls. If they are not relieved in twenty-four hours, I repeat the dose; but it it is very seldom that I have had to repeat it. One thing further I entreat the shepherd to do, for the comfort of the innocent animals; which is to *tagg* them.

I am credibly informed that wheat flour and water, mixed to the thickness of milk, will readily cure scours in human or brute creatures. A piece of opium as large as a common chestnut, dissolved in a pint of good brandy, will cure the scours in a horse. I have never known it to fail."

Mr. Albert A. Doane, of Middle Granville, N. Y., pursues the following course, in reference to scours:—"When the cases are severe, we give pulverised charcoal, about two or three table spoonfulls for a dose. As a preventive (and we believe in the homely proverb, 'an ounce of prevention is worth a pound of cure,') we mix powdered charcoal, sulphur, and ashes with salt, and keep the mixture in some convenient place, where the sheep can get at it at all times."

Spaying Cows and Heifers.

Eds. Cultivator—In answer to your correspondent who asks for information in regard to spaying cows, I would say that I have practiced it for twenty-five years, and think I can judge with tolerable correctness as to the benefits of the operation.

A spayed cow will give more milk in a year than when she went dry thirty, sixty, or ninety days; and she is ready to fatten at any time, and will take on fat much more readily than those cows that are dried and fatted in the usual way. I have followed the practice—(and so did my father before me)—of spaying cows in the spring, and milk them two or three years, or as long as I please—without the trouble that is had with those that are not spayed. When fatted, the quality of the beef is superior to that of any ox or steer, and fetches a higher price in market. In the town or city, where milk is the object, the spayed cow may, as you say, "continue in milk indefinitely as to time."

As to the operation, it is difficult to give such a description on paper, as would enable the farmer to perform it successfully; and so it would be in regard to describing the amputation of a limb, or the dissection of any part of the body. I can only say, that spaying can be performed without any particular risk.

It is important that the farmer should know what his cow is best fitted for. If she is inclined to get fat with good feeding, I would not spay her for the purpose of *milking*, but would do it for the purpose of *fattening* her. But on the other hand, if the object is milk, and the cow is a good milker, spay her and keep her in milk. I have milked them from one to six years; and in the counties of Ontario, Livingston and Genesee, I have operated on hundreds from six weeks to eighteen years old.

Reference can be given to those who have milked spayed cows for several years, have worked spayed heifers, and have raised and fattened them from calves, and all speak in high terms of the benefit of the operation, when well performed. WM. CARTER. *East Bloomfield, Ontario Co., N. Y.*

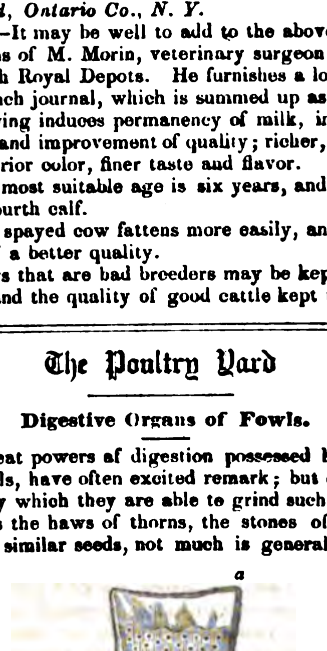
NOTE.—It may be well to add to the above, the conconclusions of M. Morin, veterinary surgeon at one of the French Royal Depots. He furnishes a long article for a French journal, which is summed up as follows:

1. Spaying induces permanency of milk, increase of quantity, and improvement of quality; richer, more buttery, superior color, finer taste and flavor.
2. The most suitable age is six years, and after the third or fourth calf.
3. The spayed cow fattens more easily, and furnishes beef of a better quality.
4. Cows that are bad breeders may be kept as good milkers, and the quality of good cattle kept up. EDS.

The Poultry Yard

Digestive Organs of Fowls.

The great powers of digestion possessed by gallinaceous fowls, have often excited remark; but of the *machinery* by which they are able to grind such hard substances as the haws of thorns, the stones of cherries, and other similar seeds, not much is generally known. For this reason, we have thought our readers would be interested with the accompanying cut of the gizzard, and a description of that and other digestive organs of fowls.



49—GIZZARD OF THE TURKEY.

The cut, (fig. 49) shows the gizzard of the turkey laid open: *a*. lower portion of the crop; *b*. ventriculus succenturiatus, with its zone of glands; *c*. muscle of the left side of the gizzard; *d*. muscle on the right side.

Various experiments have been made to test the solvent and grinding powers of the gizzard. Without going into detail in describing these experiments—which in many instances appear to have been unwarrantably cruel—it may be useful to mention some of the astonishing results which were produced.

Spallanzani prepared tin tubes, which he filled with grain and forced down the throats of common fowls and turkeys. After twenty to thirty-six hours the birds were killed; the grain had been dissolved, and the tubes broken or distorted in a singular manner. He then strengthened the tubes by soldering plates of tin with small holes through them, to the ends of the tubes. The tubes, when taken from the gizzard of the turkey, were compressed or broken, the ends driven in, and the grain was entirely dissolved. He next tried what effect would be produced by sharp bodies thrown into the gizzard. In twenty-four hours the gizzard of a cock broke off the angles of a piece of rough jagged glass; and no wound or injury appeared on the gizzard. Twelve needles were driven into a ball of lead, the points projecting about a quarter of an inch from the surface; the ball was coated with paper, and forced down the throat of a turkey. It was retained thirty-six hours, the bird showing no uneasiness. When taken from the gizzard, the points of the needles were found broken off close to the surface of the ball. Two of the points were found among the partly digested food—the others were believed to have passed through the intestines. In the next experiment, he fixed twelve small lancets, very sharp both at the points and edges, in a similar ball of lead. He says—"the lancets were such as I use in the dissection of small animals. The ball was given to a turkey cock, and left eight hours in the stomach; at the expiration of which time that organ was opened, but nothing appeared but the naked ball, the twelve lancets having been broken to pieces. I discovered three of them in the large intestines, pointless, and mixed with the excrements; the other nine were missing, and had probably been voided. The stomach [gizzard] was sound and entire as that which had received the needles. Two capons, of which one was subjected to the experiment with the needles, and the other with the lancets, sustained them equally well."

We give from Martin's late Treatise on Poultry, the following description of the digestive organs of fowls:

"The œsophagus or gullet leads into a dilatation called the crop, craw, or *ingluvies*—a large membranous cavity, which lies just before the breast bone, and which receives the food when first swallowed. It is furnished with many mucous and salivary glands, the exudation from which tends to soften the grain, and fit it for further elaboration. This crop or sack is not very sensible, and when gorged with food may be opened by means of a sharp pen-knife or lancet, and relieved of its contents. If the edges of the wound be neatly joined together, and secured by a few stitches—the bird being at first kept fasting, and afterwards only allowed a little sopped bread or the like—it will generally recover without any ill symptoms. To this crop succeeds a narrower portion, called *ventriculus succenturiatus*, the lining membrane of which is beset with numerous glandular orifices, forming a sort of belt, which pour out a copious secretion of digesting or gastric juice, which mingles with the food in the gizzard or grinding stomach, into which the *ventriculus succenturiatus* immediately leads. The gizzard is a powerful grinding mill, composed of immensely thick and firm muscles, and lined with a tough insensible coriaceous membrane. The two massive hemispherical muscles which essentially form the grinding apparatus, are opposed face to face, like two millstones, and they work upon each other, titurating to a pulp the food subjected to their action, and rendering it fit, after being broken down, for the influence of the gastric juice, which, unl this takes place, in the case of grain, would have ttle or no solvent power upon it. To assist in this ill-like operation of the gizzard, granivorous fowls wallow small pebbles or stones—a practice clearly intinctive, and sometimes carried to a greater extent by omestic fowls than would seem necessary. Nevertheess, without a sufficiency of these pebbles (and fowls hould never be so kept as to be unable to obtain them,) igestion is suspended, the body derives no nutriment rom the food (unless indeed it be pultaceous,) and the ird droops and wastes away."

Mr. M. adds the following from Sir Everard Home's *omparative Anatomy:*

"When the external form of this organ [the gizzard] first attentively examined, viewing that side which anterior in the living bird, and on which the two belies of the muscle and middle are more distinct, there eing no other part to obstruct the view, the belly of he muscle on the left side is seen to be larger than on he right. This appears, on reflection, to be of great dvantage in producing the necessary motion; for if the wo muscles were of equal strength, they must keep p a greater degree of exertion than is necessary—while in the present case, the principal effect is produed by that of the left side, and a smaller force is used y that on the right to bring the parts back again.

"The two bellies of the muscle, by their alternate ction, produce two effects,—the one, a constant fricion on the contents of the cavity; the other, a presure on them. This last arises from a swelling of the muscle inwards, which readily explains all the instanes which have been given by Spallanzani and others of he force of the gizzard upon substances introduced into t—a force which is found by their experiments, always o act in an oblique direction. The internal cavity, when opened in this distended state, is found to be of n oval form, the long diameter being in the line of he body; its capacity nearly equal to the size of a pulet's egg; and on the sides there are ridges in the hory coat (lining membrane) in the long direction of the val.

"When the horny coat is examined in its internal tructure, the fibres of which it is formed are not found n a direction perpendicular to the ligamentous substance ehind it; but in the upper portion of the cavity they ave a direction obliquely upwards.

"From this form of cavity it is evident that no part f the sides are ever intended to be brought in contact, nd that the food is triturated by being mixed with hard odies, and acted on by the powerful muscles which orm the gizzard."

Raising Chickens.

Eds. Cultivator—Many persons fail in raising hickens, for want of a little attention to them at this eason of the year. Convenient boxes for them to ay and hatch in should now be made. They should be ailed securely in sheltered places, and filled with soft ay. Old boxes should be cleansed, scalded with boilng water, and the bedding renewed. As soon as a hen hows a disposition to sit, 12 or 15 eggs should be given er and a date 21 days in advance, should be marked with halk in a conspicuous place. Hens should be preerred that have proved themselves good sitters, and hat have been successful in raising their broods. The ifference between a good and bad hen is worth attenion. I have a hen whose long and polished spur proves er six or eight years old, which to my recollection, as hatched her eggs and raised two broods of vigorous chickens every season. A. B. *Setzler's Store, Chester Co., Pa., Jan.,* 1849.

Plant well. if you would reap abundantly.

Domestic Economy, Recipes, &c.

Bread from Sprouted Wheat.

Eds. Cultivator—In your November number, page 354, a correspondent at Granville, Ohio, wishes to know the best mode of making bread from the flour of sprouted wheat. Good bread can be made from such flour, by adding a portion of whiskey, when mixed into dough. The quantity to be ascertained by trial—depending upon how much the wheat is sprouted. No more specific directions can be given, that would be of service; but your correspondent may be sure of as good, light, sweet bread, made from the flour of sprouted wheat, when the proper quantity of whiskey is ascertained and added, as from the best of flour. Wm. A. Tryon. *Grand Rapids, January* 22, 1849.

Substitute for Wringing Clothes.

Eds. Cultivator—In reply to the inquiry, made in your February number, by "D. E." of Meriden, N. H., I would inform him that there is a very simple and efficient substitute for the destructive operation of wringing clothes, known as "Robinson's Drying Machine." One suitable for a private family, say of twelve or fifteen persons, would, with its enclosing case, occupy about the space of an ordinary chest of drawers, and would resemble it in its exterior form. Within this case, are two open or spare boxes, revolving on an axis, into which the clothes are thrown *dripping wet* from the wash tub, whether of linen, cotton or woolen, whether wearing apparel, house linen, blankets, counterpanes, or what not; when by the working of the machine five or six minutes, which requires very little strength, a current of atmospheric air is produced, and a centrifugal pressure created sufficiently to discharge the water so completely from the articles in these boxes, that fifteen minutes exposure to the air renders them fit for the ironing board!

This is what the patentee claimed when showing me the invention; and from the experiment I saw made on some heavy pilot cloth, I could have no doubt of the correctness of his statements.

On further inquiry of those who had it in use, I found it gave universal satisfaction; indeed, the saving to the clothing and the economy in fuel (where drying closets were in use) is so great, that not only large public establishments and private families have adopted them, but laundresses, in the vicinity of cities and large towns are willing to meet the expense of purchasing these machines; and they feel amply paid for the outlay, by the saving they make in time, labor and fuel.

Machines on a large scale are got up for manufacturers, as by its use all kinds of scoured wool, woolen clothes, baizes, flannels, blankets, &c., &c., can be dried in the short space of six minutes, leaving only sufficient moisture to work and finish off the goods. Carpet-makers and calico-printers also find these machines of the greatest value in expediting their work.

In our cold climate where the hanging out of wet clothes with the thermometer at zero is a matter of positive suffering, and the taking of them in, at night, almost a matter of impossibility, I know of no addition to our household comforts that would be so desirable as such a substitute, to say nothing of that fruitful source of family discontent—a rainy washing-day. R. *Butternuts, February,* 15, 1849.

Recipe for Cure of a Cough.

Take of boneset as much as you can grasp in your hand, and two quarts of water; boil it to one quart; add a pint of molasses; let it simmer a few minutes, and then strain and set it by to cool. Take one gill three times a day before eating. It is an excellent remedy. I have several times received great relief by it. H. K. *South Salem, Westchester Co., N Y.*

Recipe for Making Johnny Cake.

Three tea cups of Indian meal,
One do Wheat flour,
Two do milk,
One do cream,
One egg, one tea spoonful of saleratus and half a teaspoonful of salt. A. FARMER'S DAUGHTER.

Tuscarora Corn.

EDS. CULTIVATOR—In your January number is a short notice of the Tuscarora corn. To prevent its moulding, it should be husked immediately after being harvested, leaving on enough husks to braid it together: after which it should be hung up a few weeks, either in or out of doors, as most convenient. A kind of bread is made of this corn when green, by the Tuscarora Indians. It may be taken off the cob by a coarse grater and made into balls or rolls, which are wrapped in corn leaves and boiled an hour, if the roll is as large as a goose egg. A SUBSCRIBER. *Lewiston, Niagara Co., March* 9, 1849.

Butter Worker.

EDS. CULTIVATOR—As I observed an inquiry addressed to me in the February number of *The Cultivator*, respecting the cost, &c., of a butter worker, I will answer by giving a short description of mine—plain enough if possible, to enable those wanting the article to get one made, (as I did,) by mechanics in their own neighborhood.

The machine is simply a table, the bed of which is a white maple plank, 3 ft. long, by 2 ft. 2 inches wide. A conduit is cut with a gouge half an inch deep, on both sides, and diagonally across the lower end, to a point in the centre, so as readily to carry off all brine and butter-milk. This table is placed upon a strong frame, so constructed that one end is 2 feet 2 inches high, and the other 2 feet 9 inches from the floor to the surface, showing an inclined plane of a little more than two inches to the foot. Above this, and near the centre of the left hand side—(as you stand at the upper end)—is attached a brake by means of an iron shackle, formed of a bolt passing down through the frame of the table, on that side, and secured by a nut, in the lower end of which is an eye. To the lower end of the brake, by means of a bolt entering it endwise, is secured a short shackle with an eye in one end, through which the bolt passes into the brake, and in the lower end is to receive a short link, to attach it to the lower bolt. The whole long enough to let the square edge of the brake lie level across the table. The brake is about 4 feet long, 5 inches wide and 2 inches thick—one edge square and the other round. The lower end worked off and banded, and that part extending over the table, worked into a handle.

The table should be prepared for the reception of the butter, by being thoroughly scalded with hot, and cooled with cold water. With a convenient ladle to turn and handle the butter, and the temperature of 56° or 58°, a man can work 100 lbs. of butter in one hour, which I think the dairy-women will agree with me in saying, is altogether a very great saving of labor. The cost of the brake is about $5. B. A. HALL. *New Lebanon, February* 19, 1849.

Plow deep while sluggards sleep,
And you shall have corn to sell and keep.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Cultivation of Peaches.

EDS. CULTIVATOR—Is it a general fact that the peach will degenerate in quality on being produced from seed?

I had from my agricultural or horticultural reading, derived the opinion that the peach would diminish in quality if a continued reproduction from seed were persisted in. I ever doubted the correctness of that opinion, as indicating imperfection in the arrangement of nature; and of late, I have been led to doubt it still more. Passing through, near the central part of this county, [St. Joseph, Mich.,] I called at the residence of Mr. H. K. Farran, whom I afterwards found to be a very intelligent farmer and fruit grower; and whose fine looking peaches, I thought offered quite an inducement to the cultivation of *taste*. Upon trial, I found them to be delicious. I remarked, that I supposed he had obtained his fruit by budding: he said no, he raised them from pits brought into the county with him; that they had been reproduced *three* times, and had *improved at each successive reproduction*. I alluded to the opinion of eastern cultivaters of the peach: "I know," said he, "they believe it degenerates, and perhaps it does on most eastern soils; but here," continued he, "is the home of the peach." He remarked further, that "he had raised fruit every year since his trees began bearing, and that a friend of his near by, had raised large quantities every year for fifteen successive years."

A lady of my acquaintance here, informed me that she planted the pits of some very inferior peaches, and this year, the trees were burdened with the most delicious peaches she ever tasted. I could adduce numerous additional cases, on good authority, where the same results have followed the planting of the seed, or pits. CHAS. BETTS. *Burr Oak Farm, Mich.*, 1849.

We suppose a similar law prevails in the production of peaches from seed, as in the production of other fruits by the same mode. That the degeneracy of a *species* should follow from this mode of propagation, would be contrary to nature. But if we plant seeds of our finest varieties of fruits, it is not to be expected that all the varieties so produced, would be equal to the parent. Experience proves that in raising from seed, the proportion of those kinds which are really *first rate*, is very small. EDS.

Supports for Climbing Plants.

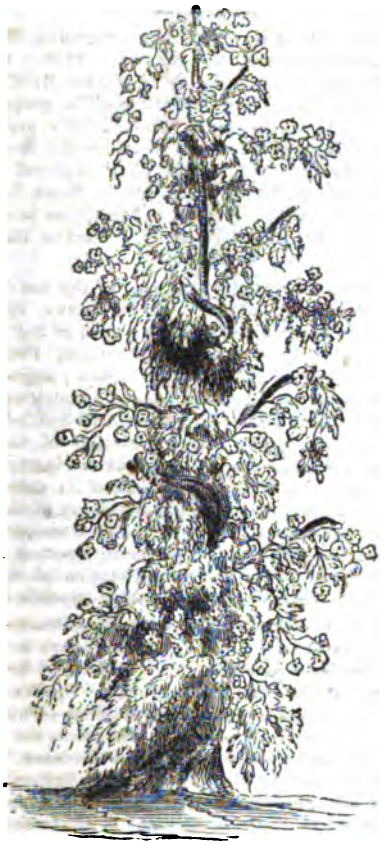
The editor of *The Horticulturist*, gives us in a late number, the following interesting and valuable hints on the supports for honeysuckles and climbing roses, with the first of which we have been long familiar, and have never, in all the highly finished, carved, and painted supports, ever seen its equal:—

"How to make *arbors* and *trellises* is no mystery, though you will do doubt, agree with us, that the less formal and the more rustic the better. But how to manage single specimens of fine climbers, in the lawn or garden, so as to display them to the best advantage, is not quite so clear. Small fanciful frames are pretty, but soon want repairs; and stakes, though ever so stout, will rot off at the bottom, and blow down in high winds, to your great mortification; and that too, perhaps, when your plant is in its very court dress of bud and blossom.

"Now the best mode of treating single vines, when you have not a tree to festoon them upon, is one which many of you will be able to attain easily. It is nothing more than getting from the woods the trunk of a cedar tree, from ten to fifteen feet high, shortening-in all the side branches to within two feet of the trunk, (and still shorter near the top,) and setting it again, as you would a post, two or three feet deep in the ground.*

"Cedar is the best; partly because it will last forever, and partly because the regular disposition of its branches forms naturally a fine trellis for the shoots to fasten upon.

"Plant your favorite climber, whether, rose, wistaria or honeysuckle, at the foot of this tree. It will soon cover it, from top to bottom, with the finest pyramid of verdure. The young shoots will ramble out on its side branches, and when in full bloom, will hang most gracefully or picturesquely from the ends.

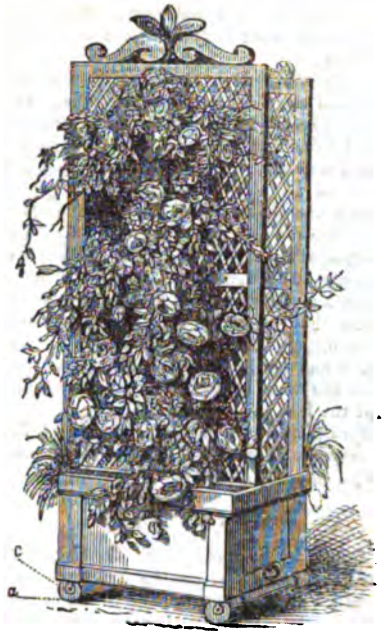


51—CLIMBING PLANTS ON CEDAR TRUNKS.

"The advantage of this mode is that, once obtained, your support lasts for fifty years; it is so firm that winds do not blow it down; it presents every side to the kindly influences of the sun and air, and permits every blossom that opens, to be seen by the admiring spectator. How it looks at first, and afterwards, in a complete state, we have endeavored to give you a faint idea in this little sketch.

"What shall those of us do who have neither cottages nor gardens?—who, in short, are confined to a little front and back yard of a town life, and yet who love vines and climbing plants with all our hearts?

"That is a hard case, truly. But, now we think of it, that ingenious and clever *horticulteur*, Monsieur Van Houtte, of Ghent, has contrived the very thing for you.† Here it is. He calls it a 'Trellis Mobile;' and if we mistake not, it will be quite as valuable for the ornament and defence of cities, as the *Garde Mobile* of the Parisians. It is nothing more than a good strong wooden box, upon wooden rollers. The box is about three feet long, and the double trellis may be eight or ten feet high. In this box, the finer sorts of exotic climbers, such as Passion Flowers, Everblooming Roses, Maurandias, Ipomea Learii, and the like, may be grown with a charming effect. Put upon wheels, as this itinerant bower is, it may be transported, as Mr. Van Houtte says, "wherever fancy dictates, and even in the apartments of the house itself." And here, having fairly escorted you back to your apartments, after our long talk about out-door drapery, we leave you to examine the *Trellis Mobile*, and wish you a good morning."



53—MOVEABLE TRELLIS.

Raule's Jannett or Neverfail.

Eds. Cultivator—*Raule's Jannett*, as described by Mr. Byram, *Horticulturist*, vol. ii. p. 19, as to the growth of the tree and its peculiar habit of late vegetation, is applicable to the *Geniting* that I have been acquainted with for fifty years. His description of the fruit is nearly correct; the flesh is of the color between white and cream; but his drawing of the fruit, p. 18, is erroneous; an irregular shaped Geniting is rarely to be met with.

A nurseryman in Mr. Byram's neighborhood (Mr. Geo. G. Hikes) has in his catalogue *Rawle's Jannett*. Now I suppose these two are looked upon as the same fruit.

The first regular nursery that I have any knowledge of, was established by John Lightfoot, on the south side of the Kentucky river, in what was then Woodford county, (now Anderson.) From this nursery, were drawn the first Genetings that ever came to my knowledge; they were quite popular, both on account of the fineness of the fruit, and their habit of late vegetation. At a later period, Mr. Francis Smith made a nursery near to Byram's station, in Fayette county, Kentucky. Mr. James Munday established a nursery in the same neighborhood; each of these nurseries propagated mainly *Genitings*. This fruit, in the beginning of the present century, was very popular, and has continued so to this day. I have planted, in the course of my life, five orchards. If I had now to plant another, of apples, I would plant forty trees out of every hundred, of Genitings.

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* We owe this hint to Mr. Alfred Smith, of Newport, a most intelligent and successful amateur, in whose garden we first saw fine specimens of this mode of treating climbers.

† *Flore des Serres.*

The impression left on my mind is, that Mr. Lightfoot procured the Genitings from Virginia. Smith's and Munday's came from Lightfoot. From the year 1794, to 1822, I lived in Lexington, Ky. When I removed to where I now live, (then Gallatin county,) in 1823, I planted an orchard of twelve acres; procuring my fruit from Isaac Bledsoe and John Jas. Dufour. The latter was the founder of the Swiss colony, Vevay, Ia., The Genitings were the same that I had been accustomed to see about Lexington, and the same of which I send you a small bundle of grafts by this day's mail.

It seems that *Geniting* is a misnomer; but having used it for fifty years, I am not inclined to change it—certainly it has no quality of early maturity. It may remain on the trees in this climate, without material injury, till the first of December.

Mr. Byram speaks of Yellow or Striped Jannet. I am not acquainted with it. LEWIS SANDERS. *Grass Hills, Ky., March,* 1849.

Color of Apples.

The following remarks of F. R. ELLIOTT, at the Ohio Fruit Convention, on the difference in the prevailing color of apples in the northern and in the southern part of Ohio, will be interesting to pomologists:

"A visitor to this convention will be struck at once, with the very marked difference between those from the north and south parts of the State. In those from the north, yellow or green is the prevailing color, while red prevails among those from the south. The apple of red exterior, is generally more fair and perfect, when grown at the south, than the yellow or green fruit. At the north, most of our yellow or green apples, have a handsome blush red cheek. this, when the same variety is grown at the south, disappears; and if the trees are upon bottom land or alluvial soil, is supplied by a dark mould or blotch, which presents any thing but an attractive appearance."

Setting Young Trees.

EDS. CULTIVATOR—I have suggested, to those who are setting out young orchards, to dig the holes large, and at least two spades deep, as advised by Downing, J. J. Thomas, and others. I had supposed, however, that it would be of but little benefit on our prairie lands; but A. R. Whitney had occasion to remove two nursery rows of apple trees, that had been set two years, which crossed a spot where there had been a pit for burying potatoes. The trees on the old pit had made three times the wood of those on each side of it, that were similar in every respect when set, and the roots were in proportion.

I would like to know whether crowding the growth of young orchards would not be likely to affect the longevity of the trees. NATHAN WHITNEY. *Franklin Grove, Lee Co., Ill.*

Large Quince Tree.

EDS. CULTIVATOR—There is a quince tree growing on the lands of D. DUTTON, in the town of Seneca, which has been carefully measured by myself, in the presence of others, and the result was as follows—girth around the trunk, 6 feet 4¼ inches—heighth of tree, 18 feet, and width across top, 27 ft. 8 in. It bore the past season 10½ bushels of marketable quinces. The fruit is of tolerable quality, something of the pear-quince variety, but seems to be well adapted to grow the pear upon, as some stocks of the kind, which I budded with the Bartlett, made a growth of over 6 feet the first season, and it increases in size with the pear. The soil which the original tree has grown from, is loam resting upon limestone gravel, which retains a great degree of moisture, and has been manured by wash from the kitchen, and an accumulation of chip dirt to the depth of several inches. I. HILDRETH. *Big Stream Point, March* 12, 1849.

Notices of Publications.

TRANSACTIONS OF THE AGRICULTURAL SOCIETIES OF MASSACHUSETTS, for the year 1848. Collected from the original returns, by WILLIAM B. CALHOUN, Secretary of the Commonwealth.—The returns of all the agricultural societies in Massachusetts, are annually published in an abridged form, under the direction of of the Secretary of State, who has employed Hon. A. W. DODGE, an intelligent farmer of Essex County, to compile the work. This volume furnishes in a convenient form, the substance of the valuable information which is yearly accumulated.

ELEMENTS OF AGRICULTURE, for the use of Primary and Secondary Schools. By L. BENTZ, of France, Director of the Normal Primary School of the Meurthe, and A. J. CHRETIEN DE ROVIVILLE, Professor of Rural Economy in the same school; approved and recommended by the Governmental Council of the Department of the Meurthe. Translated and adapted to the use of the Rural Primary Schools of the United States, by F. G. SKINNER. CAREY & HART, Philadelphia.—This is a little manual, which is calculated to be useful to persons beginning the study of the principles of agriculture. It is entirely elementary, and written in a style of great simplicity, so that the matter is brought within the comprehension of children of 12 years of age. We recommend it to public attention.

THE COTTAGE GARDEN; containing Practical Directions for the Culture of FLOWERS, FRUITS & VEGETABLES, the NATURES and IMPROVEMENT of SOILS, MANURES, and their APPLICATION, &c. By WALTER ELDER. MOSS & BROTHER, Philadelphia.—This is a book of over 200 pages, duodecimo, written as the title purports, by "an experienced practical Gardener." The author entertains the idea that previous writers on horticulture and gardening, have addressed themselves too exclusively to "the inhabitants of the *mansion*;" he has concluded, therefore, to take "untrodden ground" by addresssing himself "entirely to the intelligent *cottagers* of America."

"THE FARMER'S EVERY-DAY BOOK," is the title of a new book for farmers, now nearly ready for the press, by Rev. JOHN L. BLAKE, D. D., of New-Jersey. It is to be a large octavo, of over 500 pages, to embrace—1st. The Social Relations of Rural Life; 2d. Theoretic and Practical Agriculture; 3d. Dictionary of Terms, with 500 Receipts relating to Rural and Domestic Economy.

A PRACTICAL TREATISE on the Management of Fruit Trees; with Descriptive Lists of the most valuable Fruits for General Cultivation; adapted to the Interior of New England. By GEORGE JAQUES. ERASTUS N. TUCKER, Worcester Mass.—Mr. JAQUES has been considerably known for several years, from his interesting contributions to various agricultural and horticultural periodicals, and through the reports of the Worcester County Horticultural Society, of which he is Secretary. He is a judicious practical cultivator of fruits, and has had, besides, extensive opportunies for the acquirement of information on the subject of horticulture. His book appears to have been designed rather as a *manual* than an elaborate treatise; but will be found to contain many useful suggestions.

British and Foreign Medico-Chirurgical Review, or Quarterly Journal of Practical Medicine and Surgery.—We have received the re-publication of this work for January, 1849. Like all the previous numbers, it contains a large amount of matter of great value to the faculty, and interesting to others. Published by R. & G. S. Wood, New-York, at three dollars per year.

The Wisconsin Farmer and Northwestern Cultivator, is the title of a monthly periodical published at Racine, Wisconsin, by Mark Miller. We have received three numbers of the work, which have been filled with useful matter. Each number contains twenty-four pages octavo, and the terms are fifty cents a year.

The Water-Cure Journal, and Herald of Reform; devoted to the Philosophy and Practice of the Hydropathic System of Curing and Preventing Disease; embracing the true Principles of Health and Longevity. Joel Shew, M. D., Editor. The object of this publication is indicated by its title. It is published monthly by Fowlers & Wells, New-York, at one dollar a year in advance. Each number contains thirty pages octavo. From the specimens we have seen, we should judge it to be ably conducted.

Answers to Correspondents.

Corn-fodder for Soiling Cows.—J. C. J., Newcastle, Del. The article on the soiling of milch cows, as practiced by Cheever Newhall, Esq., of Boston, was published in *The Cultivator* for 1845, pages 22, 23. We are not aware that he has made any change in his plan, but presume he would be willing to answer any questions in regard to the business.

Curing Corn-fodder.—We can hardly say what is the best mode of curing this article, where it is grown purposely for fodder. Without very favorable weather, it is difficult to dry it so that it will neither heat nor sour. Some put it in small bundles, bound near the top, after it has dried for several days, and then put the bundles in small shocks, till so thoroughly dried that the fodder will answer to put in the barn or stack. The objection to this is, that the stalks are apt to cripple down while in the shock, and if the weather is damp, they are liable to rot. Another course is, to dry the stalks for a day or two, and then put them into heaps, and let them heat,—taking care to open the heaps before the heat has reached so high a degree as to injure the quality of the fodder. After the fodder has received a *sweating* of this kind, it dries readily on being exposed to the air, and is not liable to heat again on being stacked.

Draining Tiles.—We have never heard any objection to draining tiles, "where the water comes in at different points along the drains." We presume the water will "find its way in;" but those who have had long experience in the use of tiles can answer, and we should be glad to hear from them.

Rye Grass.—We have but little acquaintance with this grass as a *hay crop*. It has not been much grown in this country. The writer has tried it a little as *pasturage*, for which it seemed to do well. It starts early in the spring, and keeps green late in the fall. In England it is accounted one of the best grasses for hay. It is too early to mix with timothy and red-top, as the stalk would be dead before the others would be in blossom. There are several kinds of rye-grass. The perennial kind, (*Lolium perenne*) is considered good; but a sub-variety of this, called Pacey's rye-grass, is generally preferred. About half a bushel of good seed is the quantity usually sown to the acre.

Name of a Plant.—S. J., Weybridge, Vermont. We do not recognise the plant you wish to know the name of, by your description. If you will send us a specimen of it while in flower, we can probably ascertain its name; or you can probably learn it from some botanist in your vicinity.

Dorking Fowls.—N. B. P., Plymouth, Tt. We do not know of any Dorkings for sale in this vicinity.

Corn-planter.—S. B. H., Providence, R. I. Emery's corn planter can be regulated to drop seeds at any distance, from four inches to six feet. The space between the rows may, of course, be whatever is desired. One man and a boy with a horse, will plant with this machine, from ten to twelve acres of corn in a day. This will give you an idea of the "economy."

Rich's Straw Cutter.—We cannot say where this machine is for sale at the present time. It is less rapid in its execution than the cylindrical cutters, and we are not aware that it has any advantage over them.

Disease in Cows' Tongues.—W. R. M., Newport, Herkimer county, N. Y. Some authors speak of inflammation of the tongue, with the formation of vesicles or bladders, as a symptom of *black-leg;* but we have no account of *worms* in the tongue. What appeared to be worms in the case to which you allude, were probably, as you conjecture, inflamed pappillæ. We should prefer giving the animal some cathartic medicine, and bleeding it a little, to "shaving" the tongue.

Hay Press.—M. W. M. Cornwall, C. W. We have taken measures to have a cut and description of one of the best presses, for *The Cultivator*.

Black Alders.—J. M. C., Carlisle, N. Y. Cutting alders in August, for two or three seasons will generally kill them.

Muck.—The muck from alder swamps would improve the fertility of a gravelly soil.

Lead Pipe.—G. A. H., Potsdam, N. Y. The cost per foot would vary, according to the size of the bore. Half-inch would cost four cents per foot—three-fourths inch six cents per foot. It may be had at the Albany Agricultural Warehouse.

Agricultural Societies.

Ohio State Society.—Fair to be held at Cincinnati September 5th, 6th and 7th, under the direction of the Ohio State Board of Agriculture. We understand that premiums are open to competition to citizens of other states. A splendid display will undoubtedly be made of all kinds of live stock, and all products of agriculture.

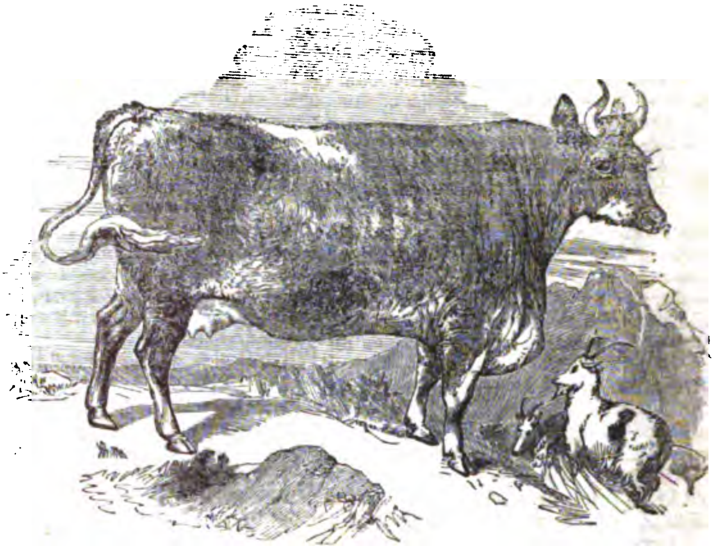
Rensselaer County, N. Y.—Fair at Troy, on the 25th, 26th and 27th days of September. This is one of our most able and influential county societies. The exhibitions are always good, and the officers are making unusual exertions the present season.

Essex County, N. Y.—Fair to be held at Keeseville on the 18th and 19th. Sept. A handsome list of premiums is offered, and we presume a good exhibition will be made.

Onondaga County, N. Y.—Fair at Syracuse, on the 3d, 4th and 5th of October next. We have received a list of the premiums, regulations, &c., which are liberal and judicious.

Windsor County, Vt.—Fair at Windsor, on the 4th and 5th of October next. The premium list is on a liberal scale, and we presume will call out an extensive competition.

Litchfield County, Ct.—Show and Fair at Litchfield, September 26. The shows of this society are always interesting, and from the list of premiums, we presume there will be a good display the present season.



52—KERRY COW.

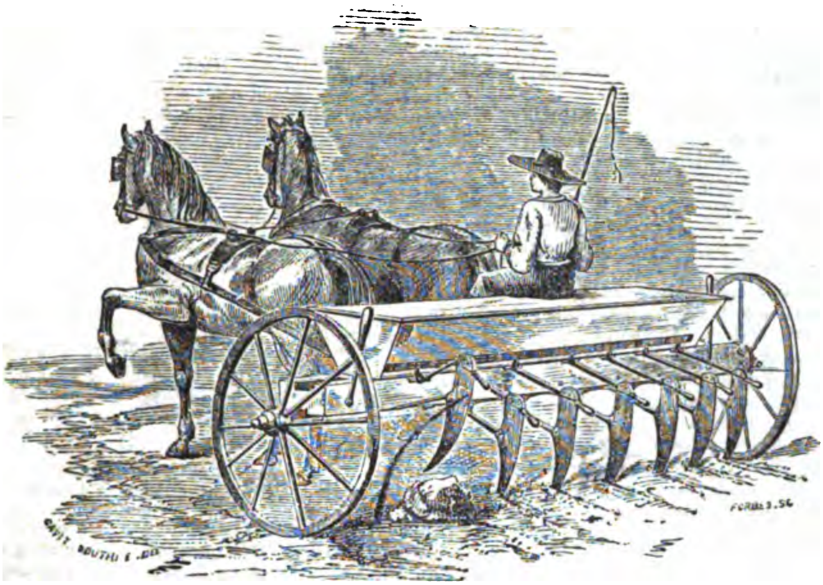
Irish Cattle.

In alluding, in a previous article, to the Irish cattle, we mentioned that there were two distinct stocks in the island, which might be considered indigenous. One of these, inhabiting the mountainous districts, evidently belongs to the race of Middle-Horns; while the other, whose natural habitat is the lower country, as clearly belongs to the division of Long-Horns. Of the former, there are several varieties, but the Kerry breed presents the most marked and distinct characters. In many points it resembles the North Devon; but it is described as shorter in the leg and thicker in the neck, and somewhat heavier in the shoulder. It is of various colors; some are red, others brown, others brindled, and some with white intermingled with these colors. It is a very valuable breed, and is held in high estimation. The animals are very hardy, thrive on indifferent pasturage, and generally find support on their native hills, unsheltered. The cows are excellent for the dairy; and in the celebrated butter districts of Ireland, are preferred to any other breed. Youatt says—"The cow of Kerry is truly a poor man's cow, living every where, hardy, yielding, for her size, abundance of milk of a good quality, and fattening rapidly when required." Our countryman, Mr. Colman, states that he found in Ireland a dairy of five cows of this breed which had yielded an average of 320 pounds each of butter, (actually sold) in a season. The Journal of the Royal Agricultural Society, gives an account of a trial made between three Ayrshire, three Galloway, and three Kerry cows. The Ayrshires gave rather most milk, but the Kerries exceeded them all in butter. The following description of this stock is taken from Rawson's Survey of Kildare: "It [the cow] should have a sweet, placid countenance; a neat, clean horn; head very small; neck very thin at the head, tapering gently and increasing where it meets the shoulder, so as gently to cover it; shoulders flat and thin in the blade; chine not too fine; chest very deep and full at the breast; ribs rising roundly and swelling from the chine; couples close; hip not too wide, and nearly concealed by the high arching of the ribs, and closeness of the couples; hind quarters broad and lengthy, narrowing gradually to the tail, which should be snug between the bones; the quarters on the outside flat, on the inside full, but not extending too low; legs fine and clean in the bone."

We think the Kerry breed would be found very useful in this country; especially for the dairy, in the northern sections, where it is desirable to unite hardiness of constitution with milking properties; and it seems rather singular that among all the breeds which have been imported, this one, which all authorities agree in representing of superior excellence, should have been overlooked.

Good Cows.—The cows which received the premiums of the Essex County (Mass.) Ag. Society, last year, gave the following products: The one which took the first premium was six years old—"of mixed breed." from 3d June to 3d July, she gave an average of 18 quarts of milk per day, beer measure, which yielded ten pounds of butter per week. Her feed "common pasture only." The one which took the second premium, gave from April 28th to September 28th, 2,405 quarts of milk. The one which took the third premium, was eight years old, a cross of the Durham breed. She gave from the 27th May to the 25th June, an average of 15½ quarts per day, which yielded a little over two pounds of butter per day—weighed after it had been twice thoroughly worked. In 121 days, her milk gave 192 pounds of butter. Her feed was "good pasture," with 15 quarts of meal during the trial of 30 days. The one which took the fourth premium was nine years old, and gave, in one year, 8767 pounds of milk, —probably about 4,383 quarts—or an average of about 12 quarts per day. The one which took the fifth premium, was eight years old, and afforded 15 pounds of butter in a week, in July last. Her feed "common pasture" and one quart of meal per day. The one which took the sixth premium, gave 2,448 quarts of milk from April 25th to September 26th.

"A Subscriber," at New South Berlin, N. Y., states that he has practiced running the common plow twice in the same furrow, in order to answer the purpose of subsoiling. This plan is similar in principle to trench plowing, and where the subsoil is rich in the elements which support vegetation, it answers well; but where the subsoil is sterile, it is a better way to loosen it with the subsoil plow, without bringing it to the surface, or deeply covering the top soil.



50—PALMERS' WHEAT DRILL.

Palmer's Wheat Drill.

THIS is a recent invention, designed to combine, in a simple and substantial form, the advantages of the numerous English and American drills. In relation to its construction and operation, we take the following from the description given by the inventor:

"The frame-work consists of a simple axle, four by six inches, and a pole, on the former of which is placed a box or hopper. One simple distributor driven by a cam wheel and friction rollers, conveys the grain from the hopper into the several drills, through hollow braces or levers, and the quantity in each drill cannot vary a spoonful in sowing five bushels. Each drill is independent of the others, and either can pass over a stone or other obstruction eighteen inches high, without interfering with the operation of the other. It will drill perfectly, a strip of land of any width, from four inches to the entire width of the machine, and will work on aud of any shape, without wasting the grain. All the eeth or drills can be raised or remain in a position eighteen or twenty inches from the ground, rendering t perfectly safe to drive over the roughest places. By he most simple movement, the distribution of seed can e stopped in an instant, or continued with the same ase. All the injury the drill can sustain by coming in contact with roots or fast stones, is the breaking of a mall wooden peg, which is easily replaced. The machine is so contrived, that by a very simple movement. he interior work is exposed to view, and at all times, he grain, while passing into the drills, is in full view of the operator, so that he can detect at a glance, any toppage of the grain, and at once remedy it."

For further particulars, see advertisement in this umber.

SUFFOLK AND MIDDLESEX PIGS.—Mr. WM. STICKNEY, of Boston, informs us that he has lately received rom England a boar of the Suffolk breed, and one of he Middlesex breed. These, in addition to his other wine, of the same breeds, will give a very superior tock. The pork of these breeds is much liked at Boston.

The Farmer's Note-Book.

Manufacture of Cheese.

EDS. CULTIVATOR—Having been so frequently addressed by different persons in this and other states upon the subject of dairying, that to reply to each individually, would be quite inconvenient and burthensome, I propose answering some of the most important questions generally asked by new beginners, through the columns of your widely circulated paper,—hoping they will reach every person who deems *book farming* of sufficient importance to take an agricultural paper. At the low rate that such papers are now afforded, those who do not take one, have a poor excuse for begging information of their neighbors, to keep pace with the present tide of improvement.

"What kind of cows are most profitable in a dairy ?"

It depends much upon location. If a dairyman is remote from a good grain market, where the coarser grains would bear a better profit fed to milch cows than to market otherwise, his selection should be of deep milkers, that will bear grain feed without accumulating too much flesh. If near a good beef market, where beef is worth nearly as much per hundred as cheese, look well to the size and thrift of a cow, so that if she is not a deep milker, she will turn well for beef. As a a general rule, those are most profitable that are deep milkers, and will hold out a good flow of milk through the season, keep in good condition, and are quiet and gentle. He who cannot furnish plenty of good feed, should beware of such cows as have been highly fed, or his profits will be small.

"What is the best age of a cow ?"

From five to ten years old. I have no objection to a cow ten years old, for a season. She will consume more feed than a younger one, but her milk is richer till she begins to decline in condition, and lose strength and vigor.

"What is the most congenial feed for cows immediately before and after calving ?"

Plenty of good tender hay or grass, and a small quantity, *daily*, of such other food as is best calculated to loosen the bowels and nourish the system, without creating a fever in the secretive organs. Wheat bran, oat meal, potatoes, or other roots, are deemed best for that purpose. If a cow is in high flesh, a mild bleeding from the neck, with half a pound of salts, fed in a mash, previous to calving, is good.

"What quantity of grain will a cow bear feeding, profitably, and should the kind be varied, at different periods, during the milking season?"

All cows will not bear feeding alike. Some not being deep milkers, would acquire too much flesh, and shrink in milk, with the same amount of feed that others would turn to profit in milk. Hence the necessity of feeding *separately*, with close observation in regard to the constitution and capacity of different cows. A man's observation in his own practice, is generally the best test in this matter. I have long since abandoned the practice of heavy feeding before and immediately after calving. Two quarts of corn or barley meal, or four of oat meal, or six quarts of wheat bran, may be safely fed, daily, to each cow. While kept to hay, grain feed should be made into slop, and fermented before feeding. The profit of feeding grain more, or longer than to bring cows to grass healthy and strong, would depend upon the comparative value of the feed with that of the product. Nothing can be fed to a cow that will increase the quantity of her milk from plenty of good grass. The only gain in feeding slop and grain during flush of feed, is by enriching the milk and retaining the cows' appetite for it when grass fails. When first turned to grass, cows are apt to scour, and shrink in milk. Dry wheat bran, or cob meal, will then be better than slop feed. Barley and corn meal, are too cathartic to feed in large quantities while the cows are at grass.

"Can all dairymen make it profitable to grow corn, sown broadcast or otherwise, to feed to milch cows?"

Where the soil is strong enough to bear a large burthen without manuring too highly, it will bear a profit, as it is the best feed that can be given to keep up the flow of milk between early and fall feed. But where the soil needs much manure, it is not good policy to manure highly a small piece of ground to obtain a large crop of any kind, to the neglect of other important crops. In other words, the dairyman would receive a greater benefit, in a long run, from distributing one hundred loads of manure on ten acres of meadow land, after harvest, or putting on that amount with the seed when stocking down for meadow, than by putting it on one or two acres to grow corn, to feed cows in summer. A small feeding of corn daily, will take the appetite from grass with little or no benefit. I have found it best to feed plentifully at evening only.

"What is the best mode of heating milk and scalding curd?"

That which will produce the most perfect equilibrium of heat through the whole mass, with the least exposure to excess of heat. A smaller vessel containing the milk or curd with whey, set into a larger vessel which contains water, through which heat is conveyed to the vessel containing the milk or whey, is the safest mode, and is now generally practiced here. The more water there is in the larger vessel, the more uniform heat is conveyed to the milk. If a large tin vat is used, set into a wooden box or vat, the tube attached to one end of the tin vat, and extending down through the bottom of the wood vat, to discharge the whey when the curd is sufficiently scalded, should be large enough to let off the whey at once, or the curd will settle or pack together, and require much hard labor, and will waste, by friction, in separating it and making it fine enough to drain and salt properly. A vat for thirty or more cows, should have a tube at least two inches in diameter, and the tin cylinder, with a tube at one end, to fit snug into the tube carrying off the whey, should be as high as the vat, and four or five inches in diameter; with as many very small holes punched in it as can be and hold together. in order to strain the whey from the curd as fast as it will pass off through the tube.

"Why would it not answer as well to pass steam directly into the milk or whey and curd, as it would save expense in fixtures?"

Because that portion coming in contact with steam, would be exposed to an excess of heat, and would not be affected by rennet like other portions which were not overheated. Consequently, a strict affinity would not be maintained, which is necessary for a perfect coherence; and more or less would float off with the whey, or make trouble in curing the cheese.

"Is a thermometer a sufficient guide in making cheese?"

A thermometer *that is correct*, is an indispensable guide in measuring the amount of heat to be used; but the time of raising the heat and continuing its effect, must be varied to meet contingent circumstances. A. L. Fish. (To be continued.)

Improved Picket Fence.

Eds. Cultivator—In many sections of our country, the scarcity of fencing timber is beginning to be severely felt, which makes it necessary to economise our materials to the best advantage.

I am building a field picket fence on a plan which for ornament, cheapness and durability, and the facility with which it may be removed, where the farmer wishes to alter the lines of his fields, may be well recommended in preference to any other wood fence,—requiring only half the number of posts necessary for the common board fence.

In the first place, two benches are prepared about 3 feet high, and placed about eight feet apart, for the purpose of supporting the scantling, while the pickets are being nailed on. Two scantling, sawed two inches by four, twelve or thirteen feet long, are then laid on the benches, where should be fixtures to keep them to their places. A scantling is also laid on for the upper ends of the pickets to rest against while nailing, in order to bring them in line. The pickets are then nailed on with ten-penny nails, two nails to each picket, projecting over the scantling, above and below, about eight inches; the pickets to be sawed in the mill from three to four inches wide, and then cut across into three lengths, if the strips are twelve or thirteen feet long, and for field fence, nailed on with a spacing board of five or six inches.

The posts are then, if for wet land, well sharpened and driven down with a maul. A five-quarter hole is then bored through the post at a suitable height from the ground for the underside of the upper scantling, and a pin of white oak, or other suitable timber, is driven through the post, having a head or projection at the end on the upper side, sufficient to hold the lapped ends of the lengths as they meet on the posts. The lengths of fence prepared as aforesaid, are then taken up, and with a six inch lap, hung or laid on the pins, and a stone rolled against the fence, or a short stake driven down, is sufficient to confine the bottom. In dry ground the posts should be slightly sharpened and set in the usual way.

The advantages of this fence over the common board fence are obvious. Posts in all moist lands, are subject to be raised by frost—some more and some less. In the spring the boards are found more or less split, and the nails broken, without the possibility of replacing the posts by driving them down; but should the posts of a fence built on the above plan become raised, they can, in the spring, while the ground is soft, be very easily driven down, as the weight of the fence only ts on the pins above described. If the posts should ecay and rot off by the ground, they may be replaced new ones, while the lengths of fence, if constructed oak, hemlock or chestnut, will last good from fif- en to twenty years. A length is easily removed for e purpose of passing a team, and as easily replaced gain.

It must prove a light and convenient fence for vamps and marshy grounds, also for river flats, which e subject to be swept by floods in spring. The ngths being light, may be taken off the hooks in the ll, and be deposited on a bank in a place of safety and adily replaced after the spring freshets. The pickets ay be nailed on, and the lengths prepared, before they e taken to the field, and iron hooks may be substitu- d for wood to good profit. The farmer who procures s material and erects his first fifty lengths of the im- roved picket fence, will not, if he studies economy, ery soon be seen making old fashioned board fence. AVID SILL. *North Argyle, Washington Co., N. Y., arch* 29, 1849.

Cement for Cellars.

EDS. CULTIVATOR—What is the best mode of ren- ering a wet cellar dry, that cannot conveniently be rained? I pounded stone all over the bottom, and en plastered it with water lime, made by R. H. Bangs, ayettville, N. Y. It was very dry till there came a eavy rain, and then it was full of water, or even with e surface of the ground which is but 18 inches above e bottom of the cellar. It broke the cement, lifted it p, and cracked it in pieces. It seemed to soften when e water came to it, and did not adhere to the stone, n the bottom. I think the lime was not good, or it ay be we did not mix it right. How should it be mix- d? What proportion of the purest lake sand is to be ixed? Should any quick lime be mixed with it? Is ere danger of frost injuring it when *fully set*, when here is no water upon it? Can a cement be made of r and sand, that will resist the water? We labor under great disadvantage in this country, for the want of cel- rs. The land is so level that we cannot dig, because we annot drain. I was induced to dig one and a-half feet, inking to stop out the water with water lime, but so far has failed; and several others in this county, prepared the same way last summer, failed. Some find fault ith the lime, and some think it cannot be done. Have ny of your subscribers tried it, and how have they suc- eded? Where can the best warranted cement be had?

A good cellar is everything to the farmer, and any ethod to render them water proof, will be valuable formation to any and all of your subscribers here. A. KEENEY. *Erie, Mich., Feb.* 22, 1849.

Turning in Green Crops.

The stage at which crops turned into the soil would of the greatest value as manure, is a point of con- derable importance. Heretofore it has been a com- on opinion that plants produced the most beneficial sults in this respect, when they had attained their reatest bulk and weight, and before there had been y diminution from drying or ripening. Several ex- riments however, seem to show that where a large lk of green vegetable matter is placed in the soil, e sap runs into the acetous fermentation—producing n acid injurious to growing crops.

ANDREW NICHOLS, of Danvers, Mass., states to the ficers of the Essex County Ag. Society, that he cut crop of corn fodder in the month of September, and d it carefully buried in the soil by the plow. The re- lt, he says, "was no benefit to the land, the loss of the rop plowed in, and half the crop of corn planted thereon e succeeding year." He accounts for these facts on the following theory: "The stalks had fermented, and been converted chiefly into alcohol and vinegar—the former flying off by evaporation, and the latter uniting with the alkaline or ferruginous earths—forming salts less fertilizing perhaps, than their bases, as they existed in the soil previous to their uniting with the acid."

We have heard of similar results from plowing in green clover, buckwheat and grass. Hence, better effects follow from allowing the crop to become so dry before plowing it in, that the acetous fermentation will not take place. We believe this is the conclusion now held by some of our best farmers who are in the habit of plowing in clover.

Cost of Wire Fence.

EDS. CULTIVATOR—I thought that it possibly might be of service to the farming community, through the pages of *The Cultivator*, to say a few words on wire fence. Much has already been said and done in regard to all kinds of fencing; but I think the wire kind is by far the cheapest as well as most beautiful. I ran a fence, 340 yards, across a 40 acre lot. My object was to make a strong, as well as a cheap fence. The wire I used was No. 9 and No. 7. No. 10 is too small. The fence is five strands high—each strand about 10 inches apart. The fence is five feet high. The expense is as follows:

310 lbs. wire. Nos. 7 and 9, at 8 cents,	$24 80
28 Red Cedar posts. at 12½ cents,	3 50
28 do do small, at 6¼ cents.	1 75
To 3 men 2 days putting up fence, at 50 cts. and found, (say 25 cents a-piece,)	4 50
	$34 55

I placed a small post between every two large ones. The holes in the posts, (5 in each post,) I bored with an inch auger. After the wire was put in and tightened, I drove a plug in, to prevent the rain from rusting the wire. After the fence was up, I took about a pint of *tar*, and with a brush dipped in tar, coated all the wire.

The posts of the fence are 20 feet apart, which I find not too much. H. V. L. *Port Penn, Del., March*, 1849.

Cost of Fattening Pork in Massachusetts.

F. DODGE, of Danvers, Mass., states that in the spring of 1848, he bought from a drove, seven shoats, the total weight of which was 925 pounds. The price paid for them was seven cents per pound. They were fed an average of 184 days, and their average gain was 179 pounds of nett pork. The cost of the food they consumed was as follows:

68 bushels corn at 53 cents,	$36 04
30 do do damaged. at 35 cents,	10 50
50 do corn at 65 cents,	32 50
8 do meal, at 65 cents,	5 20
	$84 24
Add first cost of pigs,	64 75
Making a total cost of,	$148 99

The whole quantity of pork afforded by the pigs killed, was 2178 pounds, which was sold at 6½ cents per pound, amounting to $141.57—leaving a balance against the pigs of $7.42. The inference from this statement, is that at the above prices of grain, pork could not be profitably produced at six and a-half cents per pound. But it is suggested that something might be saved by breeding the stock, instead of purchasing shoats at seven cents per pound, live weight. It is thought, however, that the manure afforded by the hogs, would be of sufficient value to more than overbalance any deficiency which might appear in the account by only crediting the pork.

Profitable Cultivation.

The Middlesex (Mass.) Agricultural Society, awarded their first premium on farms to that of George Pierce, of West-Cambridge. This farm consists of only forty acres. It is devoted to the cultivation of vegetables and fruits for the Boston market. In addition to the ordinary articles of the kitchen garden, it is mentioned that about three acres of ground are devoted to *dandelions*, which it is said "afford a rich return for the labor and expense of cultivation." A large portion of the farm produces three crops in a season—"first, radishes and early peas—second, potatoes and cucumbers—and next, celery, cabbages, &c. The following is the statement of the expenses and the value of the produce, as given to the committee who examined the farm:

Hands employed from April to October, at an average of $16 per month,	$672 00
Labor paid by the day	80 00
Board of men at $10 per month,	420 00
Night soil from ten vaults,	30 00
Manure from one stable in Boston,	400 00
Teaming the same	300 00
Manure from one stable in Charlestown, the produce of 44 horses, at $10 per horse, delivered on the farm,	440 00
Manure from Porter's stable in Cambridge, 30 cords at $5.50 per cord,	165 00
	$2,507 00
Proceeds of sales from March 3d to September 23d, as rendered by the market men, of which a daily account is kept,	$4,544 79
	$2,037 79

Showing a balance of $2,037.79 in favor of the farm, exclusive of the crops on the land on the 23d of September, which the committee say, are "probably worth as much more."

Successful Cultivation.

Eds. Cultivator—Twenty-nine years ago, my father came to this place and bought 76 acres of land on credit, with not a stick chopped on it. He has cleared and fenced about sixty acres with his own hands, and has built a good house, barn and out buildings, and cleared himself from all incumbrance.

When I sent for the first *Cultivator*, my father thought I had better keep my dollar. When the year was out, he said if I sent again, he would send also, and since then we have read your valuable paper with interest, and I trust with profit.

Fruit being my favorite crop, and having a good location, I have tried it a little. The last two years, I followed *The Cultivator* as far as it went, and then I got Downing's Fruits and Fruit Trees of America. I have had excellent success in the raising of trees, shrubs, bushes, vines, &c. I have now growing, 47 varieties of peaches, 16 of apples, 22 of plums, 7 of cherries, 7 of apricots, 3 of quinces, 5 of currants, 3 of gooseberries, 7 of grapes. A good many of these varieties are on trial to test their qualities in this climate. The soil on which my trees grow is a strong clay loam. I have a patch of 90 seedling peach trees, six years old, three years in bearing. The fruit has been tried with budded peaches from Cleveland, and pronounced equal in size, and superior in flavor. The cause I suppose, is in the soil. The soil of Cleveland is clear sand, mine is strong yellow clay loam. I intend to settle the question another year whether the soil has any effect on the flavor of the peach. Downing states that peach trees should be shortened-in half of their growth. I only cut about one-third, as my trees are very thrifty. If I cut more, they make too great a growth of wood. Some of them have produced limbs five feet long the past season.

In conclusion, I would say that with all my trees, and bushes and flowers, I can get time to read *The Cultivator*. I am frequently asked—"what makes your trees so thrifty—how do you keep them so straight? I can't make mine grow so?" My answer is, I take The Cultivator.

In June last, I whitewashed all our out houses, according to the receipt in vol. ii. p. 291 of *The Cultivator*. A great many have asked for a receipt, which I give, at the same time taking occasion to remark, that if they would take *The Cultivator* they would get all of these things gratis. Selden H. Reed. *Vienna, Trumbull Co., Ohio, Jan.*, 1849.

Advantages of Railroads to Farmers.

There has been bought at this place, by men from New York and Boston, from Nov. 18, 1848, to Jan. 15, 1849, two months, 4398 dressed hogs, weighing 1,139,522 pounds—making 56 tons, 1,522 lbs., which at the average price of $5 per hundred pounds, amounts to the sum of $56,966.10. They have also bought 15 tons of poultry, at seven cents a pound,—making $2.100 paid for this article. This shows a gross amount paid out in this city, by eastern men, of $59,066.10, for articles produced in this county. This arises from allowing the railroad to carry freight. There is about 300 head feeding here for the eastern market. This pork, beef and poultry business will continue to increase from year to year—there is no knowing to what extent. John B. Dill. *Auburn, N. Y., Jan.*, 1849.

Information Wanted.

Eds. Cultivator—We frequently see it stated in northern papers that free labor is more profitable than slave, and that if southern people were to liberate their slaves they would be more prosperous and happy. As happiness and prosperity are objects which most of us wish to attain, I write to elicit information upon the subject, from some of your numerous and intelligent contributors who use free labor; which would not only be acceptable to myself, but to most southern agriculturists. I will state my own case, with some inquiries which I hope will be answered, and such other information may be given on the subject as may suggest itself.

I hold about 1200 acres of land, two-thirds of which is cleared and arable, the balance in timber. About one-half of the cleared land is in good heart; the other quite thin, but affords grazing for sheep. The land is well adapted to corn, oats, grass, and with a *favorable* season, produces good wheat. It is sufficiently undulating, with upwards of 100 acres of low grounds, most of which is good meadow land.

I have between 60 and 70 persons to support, most of whom are slaves, and about two-thirds of them too young to support themselves; consequently, the other third has to support them and do all the work of the farm. My expenses are about $2,000 per year; my income but little more; with a great deal of trouble, vexation and solicitude on account of my dependants. For my duty, as well as my inclination and interest, require that they should be well clothed and fed, and have proper attendance in sickness, which must necessarily cause much trouble and anxiety.

Now, if it can be proved to me that my condition as well as theirs, is to be benefited by getting rid of them, in the name of common sense, I ask who would hesitate? Is it not the dictate of wisdom, of interest, of every consideration, yes, of humanity itself? But how is this to be accomplished without greatly diminishing my income, which is now scarcely sufficient to support a growing family? I will not dispose of any of my lands. How am I to obtain labor to keep up about 15 miles of fencing, and to cultivate or graze my farm to advantage? How many hands would be required? Would grazing stock for market, or cheese-making be most profitable. At what price could the services of a northern man be obtained, who understands this business, to conduct it? And what would be the cost of the necessary fixtures, house, &c. for a cheese dairy? Any other information that the subject may suggest will be thankfully received. A SOUTHERNER. *Barboursville, Va., March*, 1849.

Sheep and Wool.

These have been at the lowest ebb for two or three years past. But a change is commencing, and these are having a steady, upright tendency—at least so it would seem. Some say it is only a mere spasm—that there is no real life in these staples—that they are dead—that wool-growing is so unprofitable that it must be abandoned—or driven to those portions of the country where wool may be grown at little cost. Within the past two years, it is thought that 1,000,000 of sheep have been killed in Vermont for their pelts and tallow. Some portions of that wool-growing state are now almost destitute of sheep, and dairies appear in their stead. So of the Western Reserve in Ohio. So of many other portions of the country.

Now what is the truth on this subject? Will some of your subscribers give us their views? Shall I be able to determine how to employ a little spare capital as a farmer? Shall I invest in sheep or in cows? and will some one inform me, what the north and east are to rely on? Can northern farmers grow wool profitably?—Or is there greater profit to be derived from dairy products. My opinion is not made up on the subject. Certain it is that wool-growing has been profitable. It is equally certain that it has been a poor business—and now, another change is taking place. Many a man wishes to know what to do. Will some one tell us? L. B. G.

Lime and Charcoal for Potatoes.

EDS. CULTIVATOR—I send you the following experiment, showing the comparative effect of powdered charcoal and lime in raising potatoes, &c.

May 10, 1848—I planted Early Scarcity potatoes, in drills, three feet apart, made with a common plow. I scattered a moderate quantity of well rotted manure in all the drills. I then took seven rows for experiment, which was as follows: On the 24th August, I measured off 30 feet of each row, parallel to each other, and weighed the product of each, which I give below:

Row.		*Weight.*
1.	A sprinkling of lime on the seed,	26½ lbs.
2.	No lime or charcoal,	30
3.	A dressing of powdered charcoal,	34
4.	do do	35
5.	do lime,	33½
6.	do do	32½
7.	do powdered charcoal,	35½

The result shows that charcoal dust, in every case, gave a larger yield than lime, but does not prove that lime was of any advantage to the crop, although not conclusive, as there was but one row without lime or charcoal. The experiment does not show any extraordinary effect of the charcoal; but I am of the opinion that the effect of this fertilizer will be more enduring than any other manure, and on that account I consider it valuable. The charcoal I get from a forge near by, it being the dust remaining about the coal-house. The soil on which the trial was made was a sandy loam. All the tubers were sound, although the vines were slightly effected with the prevailing disease.

It is my practice to dig my potatoes early, and if possible in good weather, and spread them in a dry, cool, and airy outhouse, where they remain until it is necessary to protect them from frost, when they are removed to the cellar. When treated in this manner, I have never had any rot in my cellar. One of my neighbors dug his potatoes about the same time that I did; he had no rot in the field, and put them directly into his cellar in good order. Early in January he told me that he had lost nearly all, by the dry rot. Many others have lost more or less potatoes by rotting in the cellar. I think my way of digging early, and putting into the cellar late, after the weather has become cold, will ensure their safety. JOHN W. BAILEY. *Plattsburgh, N. Y., February*, 1849.

Importance of a Good Market.

To the farmer, a good market is next in importance to good cultivation, and you may think it of sufficient importance to your readers to note the change the construction of the New-York and Erie Railroad is now making, and destined to effect, in the kind of produce and manner of marketing, for a large portion of this State.

That road was open to Binghamton the fore part of the past winter; its first visible effect upon the price and new demand created in this section, was noticed by a large collection of turkeys, geese and chickens, made by a man from the east, an advance of twenty-five cts. per pair on turkeys. They were carried some sixty miles to Binghamton, and taken through alive. Large quantities of fresh pork have passed here from Steuben, Yates and Ontario counties, for New York by that road, as also, butter, lard, &c. Fat cattle have been bought in this region, and sent through on the road. The Hon. A. B. Dickinson, of Steuben, alone sends thirty head each week. Fat sheep are now being collected near here, to be sent by railroad.

Now all this appears new to *us*, and we discover that our whole system of doing business is to be changed, as well our overplus material, as our route and manner of reaching market.

Heretofore, about the only articles we sent to the sea board, were cattle, mostly lean, driven over a long road. Driving would reduce the flesh, if the cattle were good beef when started. Wheat, butter and wool, were sent only during the season of canal navigation.

The Erie road will be completed to Elmira in November next, and the Chemung road, to Seneca lake, which will not only give the southern tier the advantages of a new and quick market, but open a new channel for the large surplus products of the lake country.

I here predict that the city of New York will find, when it has this fertile region, the Lake Country in Western New York, to supply her market and tables during winter, that its capacity to furnish, far exceeds any section heretofore accessible.

Heretofore, our fat cattle and sheep, pigs, poultry, eggs, fresh butter, fruit, &c., have been low, compared with the price in New York. This new avenue to market will equalize prices. In marketing our pork, heavy hogs would command the highest price per pound; now the young and light, to consume fresh, are most valuable, while they cost less; because fed led less grain. Heretofore, we have kept our steers three and four years—sent them east, where the farmers have fed them six to ten months, and realised, by being near market, as much as we. After this, we shall put on the flesh ourselves, and realise more nearly the city price.

This road will open a fine field for those disposed to cultivate fruit for market. The soil and climate about these lakes, will unquestionably produce as fine, if not better fruit, than any other part of the state. It is also less liable to be cut off by frost. Much farming land has changed hands at an advanced price, during this winter, within eight or ten miles of this new thoroughfare. These improvements will enhance the value of the land through which they pass, for capital must pay a higher per centage in the interior, at present prices, than near the city.

Before the Erie canal was built, the farmers east, depended upon selling rye and corn, and feared the introduction of western wheat would ruin them; but instead of being injured, they bought their own bread, and made more money than before by selling beef, butter, eggs, &c. E. C. FROST. *Seneca Lake Highland Nurseries, Catharine, March,* 1849.

Weaning Calves.

EDS. CULTIVATOR—The practice of weaning calves, which has been handed down from time immemorial, by separating them from their mothers, is almost invariably attended with a vast deal of *bellowing*, by both cow and calf; and not unfrequently it is the case, that calves, in a very thrifty condition, when taken from the cow, refuse to eat a morsel of grass,—but keep up an incessant bellowing, and continue to pine away until they can scarcely make a loud noise, or move about. I have seen calves, many times, taken from their mothers in full flesh, and growing rapidly, and immediately stop growing, become poor, and very much *emaciated*, simply because the proper course is not pursued, with regard to so important a branch of cattle husbandry.

If such a course of management were denounced as not only *unwise*, but exceedingly detrimental to young animals, "*and as a relic of barbarism*," it might be done, in our humble opinion, without any apprehensions of incurring the odium of a calumniator. Such a course appears, upon reflection, contrary to the dictates of nature and of reason. And besides all this, who, that possesses any sympathy—any of the tender feelings of humanity, toward the brute creation—can listen to such mournful looing, as is generally heard from calves, and remain unmoved? Should I raise a thousand calves, I never would resort, save through dire necessity, to the practice which is generally adopted, of weaning them by separating them from their mothers; for it is not only *inhuman*, but most *miserable economy*.

When calves have arrived at an age suitable for weaning, it is taken for granted, that they are then in a growing and thrifty condition; and it is, or *ought* to be, the desire of every one who raises stock, to *keep* his young animals *advancing*: for it requires one-third more feed to regain a pound of flesh, which an animal has lost, than would have done to produce that flesh, providing it had never been suffered to grow poor.

The mode of weaning calves, which I would advocate as being the most proper, the best and *economical*, and which I have practiced for two years past, with perfect success, I shall give in a few words;—and let those farmers who have been in the habit of separating their calves from their mothers, for the purpose of weaning them, try the experiment, the ensuing season, with one calf, and then cast the arguments, for and against such a course, into the balance of "*common sense*," and see which will preponderate.

After the calves have sucked about six weeks, I keep them, if possible, in fresh and tender pasture, and diminish from day to day, their usual allowance. By pursuing this course for one week, the calf will learn to eat grass enough to supply the place of milk which has been withheld. During the next week, I let him have a certain allowance, once in *two* days. The next week, once in *three* days. I then put on them a leather halter, with eight or ten tenpenny nails, with sharp points, driven through the nose piece, pointing outwards from the nose of the calf. The inside of the nose piece should have a piece of thin leather sowed to it, covering the heads of the nails, in order to prevent their hurting the calf's nose.

The calf is then turned into the same field with its mother;—and as we naturally suppose, it makes every effort to suck. But the cow feeling the prick of the nails against her udder, quickly whirls about, and repels the little fellow. After a few unsuccessful attempts, it will "*give up the chase*," and feed quietly by the side of its mother.

This practice with regard to weaning calves, possesses several commendable advantages when compared with the common practice of separating them from the cows.

When calves are weaned by the side of their mothers they are always more docile and tame—they learn to feed sooner—they learn to be driven sooner—they thrive much better—they do not utter such pitiful moanings, as when alone;—and by the side of their mothers, they pass their time in quiet rumination and rest.

Calves always *need*, and *should have* the best pasture which the farm affords. But it not unfrequently occurs, that the field which we would appropriate to the calves, contains twice as much feed as is needful for them. Now, if the calves are weaned by the side of their mothers, the cows are allowed to go into the same field; and eat the grass which, under other circumstances, would have been of no profit, save as a fertilizer of the soil.

Another consideration worthy of notice is, when calves are weaned by separating them from their mothers, special care must be taken to *keep* them separated during the winter; and many times it becomes necessary to make an *extra yard* and an *extra shed;* whereas, if they had been weaned, after the mode recommended, they might be allowed to remain in the same enclosure, during the day—but at night, should be stabled.

Farmers, who raise but a few head of cattle, as is the case with myself, experience great inconvenience, by being obliged to keep their cows and calves separate when they turn them from their stalls to go to water, or to exercise.

I have practiced weaning calves with the halter, for two seasons past, with *perfect success;* and although my calves, both seasons, lost the halter from their head, before they had worn it a week, they never, after the first day when they were turned together, made any attempts to suck.

Perhaps some may think, as I at first did, that *shingle* nails in the nose piece, would subserve a better purpose than *ten-penny* nails—but they are *too short*. I have tried both kinds; and I find that long nails only will answer a good purpose. S. EDWARDS TODD. *Lake Ridge, Tompkins Co., N. Y., March,* 1849.

Potatoes Exhaust the Soil.

EDS. CULTIVATOR—I was taught when a boy that potatoes were not an exhausting crop, drawing but little strength from the ground. I have always taken this for granted, and I have made no experiment on the subject; more than to satisfy myself that they would not succeed well a second year on the same ground. If you should conclude that I have been indiscreet in taking any thing for granted and passing on forty years without examination, I could not find much fault with your conclusion. But to the subject. In the summer of 1847, a neighboring farmer requested me to go into his lot and look at his clover. On reaching his lot, he showed me a field of clover, one part of which was of a vigorous growth, while the other part was small—not more than half, if more than a third as large as the other, and the line distinctly marked through the lot. The clover was sown with oats the previous year. The year before that, my friend informed me, that the part of the field where the clover was best, was planted with corn; while the other part was devoted to potatoes. The whole, he said, was manured and cultivated just alike, and the clover was sown on all at the same time and from the same parcel of seed. Here was a thing so different from all my former notions, that I began to think I had, all my life, been laboring under a mistake.

I had several times had corn on a part of the field and potatoes on the other part; and had noticed that the subsequent grass crop was much the best where the corn had grown; but so deep was the impression that corn was a greater exhauster than potatoes, that I attributed the difference in the grass to other causes. At the time my attention was turned to my neighbor's clover, I had a piece of ground, which was seeded with grass, the previous summer with oats, after a crop of potatoes. The ground was well manured for the potatoes, and had previously borne large grass crops. I was much disappointed with the grass crop on this piece, and after mowing a very light crop two seasons, I last summer, turned in the sward and sowed grass seed—whether this will improve the crop of grass remains to be seen. Will some of your correspondents, who have made observations, enlighten us on this subject? R. R. P. *Manchester, Ct., Feb.* 15, 1849.

Draining Land.

Eds. Cultivator—I have received many letters of late, making inquiries respecting draining. The following are generally the questions:—1st. How far do you put your drains apart, and how deep? 2d. Where can tile be got, and at what price per 1000 or rod?—Do they not break with frost?

In answer to the first question, no man can tell how deep or how far apart the drains ought to be, until he has made some on his farm, and then experience alone must direct him. It is of no use to go deeper than the water lies, if that is deep enough to prevent horses or cattle from breaking the tiles. I think they should never be less than twenty inches deep,—mine are 2½ ft. deep. The distance apart must be determined by the subsoil; if porous, they will admit of a greater distance apart than if a stiff clay, unless there should be gravel under the subsoil; but the true way to lay out drains, is to lay them out as though the labor was costing nothing, because there is no danger of over draining; and no man after draining a field, and seeing that part of it has not got drains enough, can *resist* putting in more; and this is always done at more expense, and is seldom done as perfectly, as if done at first. *I speak from experience.*

In answer to the 2d inquiry, tiles can be got of Benjamin F. Whartenbury, Waterloo, Seneca Co. Three-inch tiles cost $10 per 1000, and 13 tiles will make a rod. Mr. Delafield, of Oaklands Farm, near Geneva, has imported a tile machine, by which we expect to get them still lower.

3d. They never break by frost if they are thoroughly burned, but for the lower ends of drains those that are hard burnt should be selected.

I think the following are all the directions that can be given on paper about draining. 1st. To be sure to make a good outlet for your drains; without that, a great deal of labor will be lost. In the next place, if possible, reach the fountain head. The water *almost* always rises near or at the highest part of the field. Early in the spring is the best time to stake out drains. Another thing very important is, to have tiles large enough for the main drains. I have one main drain laid with six-inch tiles, and a part with 2 six-inch tiles, and I find I shall have a part of it to take up, and lay further with double tiles. Some of the other drains that run into the main drain, which I may call sub-mains, may often require large tiles or double small tiles. I advise to do draining *perfectly* where needed. It will pay almost any expense.

I have put in 5000 tiles this spring, and will have in 5000 more by 1st May. My expense now is, digging 2½ feet drains, 15 cents per rod, tiles 13 cents per rod.

I find men can make better wages at my drains than at the public work. I can get them dug to any extent for 15 cents per rod, without board. I like to have them dug as narrow as they can be done, except some main or sub-main drains, in which I may lay double tiles. John Johnston. *Near Geneva, April* 7, 1849.

Information Wanted.

Eds. Cultivator—I should like to learn something respecting the character of that portion of country lying between the Blue Ridge and Alleghany mountains, in Virginia. Whether the country is generally level or hilly, and if it is well adapted to the raising of cattle; and if good farms of 150 to 200 acres, can be bought for reasonable sums. I have heard many conflicting reports about that country, and should like to hear its true character. Perhaps some of your subscribers from Pendleton, Bath, Rockbridge, and Greenbrier counties, will give information through the columns of *The Cultivator* respecting those counties. I should like, also, to obtain similar information in regard to the southern part of Kentucky. A Subscriber. *Perry, N. Y., March* 16 1849.

Wool-Growing in South Carolina.

Eds. Cultivator—Having some thought of going into the wool-growing business, I now take the liberty of asking some questions about sheep-farming, which I hope will be answered. I know nothing of the business, as my questions will evince; but hope the desired information will be none the less freely communicated on that account.

What is the average cost of good Merino sheep, and what is the annual income per head? Or what is the common calculation among northern farmers on these two points? Are the sheep kept all the time in pasture, or are they turned into the woods or unenclosed mountains part of the time? There is a common belief here that sheep will not do well kept in the plantation, and farmers therefore, turn them into the woods in the summer. Does confining sheep to a particular place, cause them to be unhealthy, or are they so because the pasture gives out, and the sheep dwindle from starvation? In other words, will a sheep keep healthy a whole year on the same acre of land, provided it has plenty that is good and wholesome to eat and to drink?

How many months have the sheep to be fed, and how many can they live on pasture? Are they fed on grain, and if so, what kind, and how much? It is a common opinion here, that grain, particularly Indian corn, makes sheep shed their wool. Is this true? or do our sheep shed their wool from being fed freely on grain, immediately after they have been nearly famished by neglect? Most animals shed when thriving rapidly. On this account, as well as to make the wool grow as even as possible, is it not important that sheep be kept as uniformly as possible, so as to keep them always, as nearly as may be, in the same condition? How many sheep can one hand attend during the winter, and what would the manure of a hundred sheep be worth a month, if well littered?

What kind of sheep are considered most profitable? What kind or kinds of grass make the best sheep pasture, and what the best hay for sheep? If sheep are sent into the mountains with a shepherd, what is his wages, and how many sheep can he attend? How often should sheep have salt in the summer time, and how often in winter? Don't sheep, like all other animals, pay better *when well fed* and well cared for, than by the reverse policy ?

I am aware that the answers to many of the above questions, depend much upon contingences and circumstances. What I seek, is such information as will enable me to understand the general philosophy of wool growing, and enable me to make calculations approximating the truth before I commence. And all such, whether from you or others, will be thankfully received. C. *Greenville C. H., South Carolina, March* 2, 1849.

Our correspondent will find much information in regard to the subjects of his inquiries, in Mr. PETTIBONE's communication, published in our April number. We should be pleased to receive further remarks from those who are or have been engaged in sheep-husbandry. EDS.

Stall-feeding Cattle in Virginia.

EDS. CULTIVATOR—The farmers of our county have in the last three years, commenced feeding cattle for the winter and spring markets, and our success so far is very flattering. Our sales this year range from $7 to $8.25 per hundred; and notwithstanding the very high prices paid for stock last fall, we have sold in this way, our grain at high prices, and been paid well for the trouble of feeding. I suppose about 1200 head were fed this winter within 10 miles of Charlottesville, and I have but little doubt, with a good corn crop, the number will be doubled next year. Most of these cattle are fed in close houses, and the greatest attention is paid to making and saving manure. Under this system —and dispensing with the tobacco crop, we hope in a few years to bring our lands to their original degree of fertility, and make Albermarle what nature intended her to be, the garden-spot of Virginia. R. W. N. NOLAND. *Albermarle Co., Va., March* 24, 1849.

Valuable Essay.

The Agricultural Society of Maryland, has lately awarded a prize to THOMAS S. PLEASANTS, Esq., of Petersburg, Va., for the best essay on the means for preventing the destruction of various crops, by birds, insects, &c. We have read this essay with much interest. Though brief, it contains many valuable observations, deserving the attention of farmers. Mr. P. takes the ground that insects are the enemies from which farmers suffer the greatest loss; and that the best means of preventing the ravages of many of these, is the *protection of birds*. He observes that "birds should be regarded as friends and not as enemies," and that "the indiscriminate massacre to which they are subjected cannot be too severely reprobated. If there are any exceptions, it is only in the case of hawks and owls, which not only prey upon other birds of inferior strength and activity, but are particularly destructive to domestic fowls. Though they sometimes feed on moles and mice, and even snakes, yet on the whole, no defence can be offered in their behalf."

Destruction of Moles.—Mr. P. states that he "has the authority of a highly respectable neighbor for stating that he has nearly destroyed the moles in the grounds around his house by occasionally dropping in their tracks bread pills containing a small quantity of arsenic—say a fourth or a half a grain to each hill. The Palma Christi bean also causes them to disappear; but whether they are repelled by its odor, or, which is more probable, whether they are destroyed by the coating of the seed, which is said to be poisonous, is not certainly known."

Indian Corn in England.

Much has been said and great expectations excited in regard to the export of Indian corn and meal from this country to Britain. The favor with which the article has been received in the markets of that country, has been various, owing to the condition in which it has arrived there. Large quantities were at first sent over in *bulk* without any preparation by artificial drying. A large proportion of this was much injured by fermentation. Those acquainted with the transportation of Indian corn, know how difficult it is to bring it in its natural state, from the interior of our own country to the sea-board, without its heating and becoming musty and sour. The external coating of the grain, readily admits the absorption of moisture, which is soon followed by more or less decomposition.

To remedy these difficulties, kiln-drying, on various plans, was resorted to. Large quantities of meal from kiln-dried corn, have been exported. But this, in many instances, has not proved well. It has been injured in drying—has in some instances been *burnt*, and a portion of its nutritive properties destroyed.

For these reasons, the use of the article in England, either as food for man or beast, has been comparatively limited.

At a late meeting of the Council of the Royal Agricultural Society, this subject was spoken of by Mr. Keene. He advocated the culture in the southern counties of England, of a new and early variety of Indian corn, called "the Forty-day Maize," from its beginning to show its flower in about forty days from the time of planting. In the course of his remarks, Mr. K. alluded to the opposition of the laboring classes of England, to the use of Indian corn, which he thought was owing to the inferior quality of the grain. He had, he said, sought in vain in the London market for even a moderately fair sample of Indian corn flour. "It is all stoved and high-dried, to enable it to bear the voyage, and the 'life' is taken out of it, rendering it almost insensible to the action of yeast, and so charred, as it were, by the drying process, that it remains gritty and hard, resisting every kind of cooking, more particularly baking."

We should like to know what success has attended the export of corn or meal prepared on Mr. Stafford's plan of steam-drying. We have been inclined to believe that this process would obviate some of the objections above mentioned, and that it would accomplish the object of drying sufficiently for safe transportation, without injuriously affecting the grain. We have used meal which had passed through this process, and was more than a year old, which was nearly as good for all culinary purposes, as any meal we ever saw. The "life" is *not* "taken out of it," as is proved by the fact that grain which has been through the machine, will vegetate as well as that which has not.

Fence for Grounds liable to be Flooded.

Mr. GEORGE MYERS, of Upper Sandusky, Ohio, sends us the following description of a "flood fence," said to have been invented and patented by WM. MILLER, of Pennsylvania:

Take two posts, 7 inches square and 5½ ft. in length, sink them 3 feet in the ground, (leaving 2½ feet above ground,) wedge them firmly in with stones alone. In the side of each post, and 3 inches from the ground, a triangular mortise must be sunk, 2 inches in depth, 4 inches high and 5 inches wide. A shallow notch in the shape of a V must be cut in the tops of the posts. A rail corresponding at the ends with the shape of this notch, is to be laid on the tops of the posts. The lower rail is then to be fitted in the triangular mortoise cut in the side of the posts. This is to be done by making the ends of that rail round, like to gudgeons, which are to be inserted into the mortise, each gudgeon about 2½ inches in diameter, and of any length that may please. This done, the frame of the fence is complete and ready for the boards to be nailed up and down on the two rails. The boards should be about four feet long, and nailed on that side of the rails against which the water is likely to flow.

This being finished, the fence is also finished, and the benefit of it is this: When the flood strikes against it, even at a moderate height, the round gudgeons of the lower rail will slide up the sloping sides of the mortise in which they lie, and the upper rail will, in like manner, rise out of the notches on top of the posts, and the entire pannel fall flat upon the ground, secured and resting on the gudgeons of the lower rail, until the swollen stream has spent its force and flowed over it. When the swell of water has subsided, all that is to be done to restore the enclosure, is to lift up the fallen pannels, which will easily turn on the gudgeons as an axle, and the fence will be again as perfect and firm as when first erected.

A new variety of Potato from South America.

A friend of mine received three potatoes from Bogota, in New Grenada, last April. He planted them on the 27th of that month. The season proved rather too short for them, since, on the occurrence of our first autumnal frost, Sept. 27th, they were perfectly green, and covered with bright blue flowers. They were dug by my own hand, about the 10th of October. They presented a heavy foliage, and exhibited a length and strength of roots, and number of stolens without a parallel in my experience. The tubers were very numerous, about eighty in each hill, mostly very small, many of them not larger than hazle nuts, and apparently as hardy as the roots of a *Shrub Oak*.

My friend planted them in a moist, rich clay soil, in his garden. I think they would have ripened better in dryer and poorer soil. I look upon them as a valuable acquisition, not only because I hope they will gradually accommodate themselves to our soils and seasons, but also, and much more, because their seeds afford a promising source, whence we may hope to derive new and strong varieties of valuable potatoes for general cultivation. They afforded twenty-five ripe balls last year, each ball yielding about one hundred good seeds.

The friend who sent these potatoes from South America, said nothing about the character of them as cultivated *there*. As cultivated *here*, they are uneatable, and would seem to answer to the description of the *wild* potato, as noticed in books.

Both the tubers and the seed of this new variety will be planted with care the ensuing season. C. E. G.
Utica, Jan. 1849.

New-York and Ohio Stock.

NEW-YORK vs. OHIO.—A paragraph has been published in several of the Ohio papers, under the head of "superiority of Ohio stock," stating that the cow which took "the first premium" at the New-York State Show, was purchased by a citizen of Ohio, and was offered at two county shows in that state, and "failed to take the premium." Now we do not know what cow was alluded to, but there is no evidence that she was considered the best offered at the last N. Y. state exhibition. The article conveys a wrong idea. The premiums on cows at Buffalo, were offered and paid under *six* different classes. Those for the first four on the list, viz., Durhams, Herefords, Devons, and Ayrshires, were of *equal amount*—$25 for each of first premiums; the other two, for "native or mixed breeds," and for the "best *milch* cow," were $20 each. These were exclusive of premiums offered on *fat* cows. From this it will be seen that no *one* cow could be properly said to have taken "the first premium," without specifying the class to which she belonged, inasmuch as there were *six* first premiums.

Notes for the Month.

COMMUNICATIONS have been received, since our last, from Wm. Carter, A Practical Farmer, Agricola, H. V. L., David Sill, J. C. J., Sam'l. James, S. O. Cross, L. G. Bingham, O. F. M., John Johnston, R. H. Drake, E. Halley, S. W. Johnson, I. Hildreth, Wm. Bacon.

BOOKS, PAMPHLETS, &c., have been received, since our last, as follows:—Report of the Com. of Ways and Means, on duties on imports, from Hon. E. B. HOLMES, M. C.—Elder's Cottage Garden of America, from the publishers, Moss & BROTHER, Philadelphia.—Scions of the Geneting and Bohanon apples, from LEWIS SANDERS, Esq., Kentucky.—Seeds of the "Hoo-Sang," from H. WENDELL, M. D.—Report of the Commissioners of the General Land Office for 1849, from the Commissioner, Hon. R. M. YOUNG.

AGRICULTURAL SCHOOL AND EXPERIMEMTAL FARM.—We mentioned in our last that a bill had been introduced into the Legislature of this State, providing for the establishment of an Agricultural School and Experimental Farm. We are sorry to say that this bill did not pass the Senate. Subsequently, however, Mr. CRISPELL, as chairman of the Committee on Agriculture for the Assembly, submitted a report in reference to this subject, to which was appended the following resolution, which was passed by both branches of the Legislature:

Resolved, (if the Senate concur,) That a board of eight commissioners, (one from each judicial district,) be appointed by the Governor, whose duty it shall be to meet at the city of Albany on the 16th day of May next, to mature a plan for the establishment of an Agricultural College and Experimental Farm, and prepare a statement of the probable expense of such an institution, and a detailed account of the course of studies and plan of operations recommended, to be delivered to the Governor on or before the first day of September next, to be by him submitted to the Legislature at its next session.

Under this resolution, the Governor has appointed the following gentlemen, to constitute the Board:
JOSEPH BLUNT, New-York, 1st District.
A. J. DOWNING, Orange county, 2d District.
JOHN P. BEEKMAN, Columbia co., 3d District.
SAMUEL CHEEVER, Saratoga co., 4th District.
EDMUND KIRBY, Jefferson co., 5th District.
ADRIAN LOTT, Chenango co., 6th District.
JAS. S. WADSWORTH, Livingston co., 7th District.
WM. RISLEY, Chautauque co., 8th District.

COST OF A LIME-KILN.—"A Subscriber" at Rutland, Vt., wishes to know what is the expense of putting up a lime-kiln; the kind of stone most proper for building it; the cost of filling; the kind of limestone which makes the best lime, the quantity of wood, and the labor required in burning, &c. We shall feel obliged if any of our correspondents will give the information.

THE HOME DEPARTMENT.—A bill for the establishment of a new department with this title, passed both houses of Congress at its last session. The department has been duly organised, and Hon. THOS. EWING, of Ohio, appointed secretary. We have not yet seen the bill, but we understand that the Home Department is to have the care of all matters relating to pensions, patents, public lands, Indian affairs and the census, and that the Secretary of this Department is to conduct such correspondence at home and abroad as shall tend to promote the improvement of agriculture, &c. We think this Department, under judicious management, will be of great importance to the industrial interests of the country.

The Greylock Potato—We are indebted to Hon. A. Foote, of W'mstown, Mass., for a barrel of his new variety of potato, called the *Greylock*. They are well shaped and of good size. We have tried some for the table, and though they were evidently injured by exposure to the air, they were nearly equal to any other with which we are acquainted. We shall have them planted in such a way as to give them a fair trial. Mr. F. gives us the following account of their origin and habit of growth:—"It is an *accidental cross* between the Carter and Mercer,—taking the complexion of its *skin* from the *dark* color of the Mercer, and that of its *flesh* from the *whiteness* of the Carter. It is a vigorous grower, produces as well as the Peach Blow, [Western Red] and in texture and flavor is not excelled, in my opinion, by any known variety. Side by side, the last season, the tops of my Peach Blows were badly blighted, while those of my Greylocks remained in all their freshness. Time of ripening somewhat early, but not so early as that of the Mercer. Like all the finer varieties, it is subject (here,) to the 'potato disease,' but in a less degree than either of its parent varieties. Its origin is dated back four years."

Early Potatoes.—We have received from J. W. Wheeler, Esq., of Hyde Park, a sample of the *Kemp* variety of potatoes. We saw this kind growing on Mr. W.'s farm last summer, and were much pleased with its appearance. They are very early, being ten days earlier than the Mercers, and very vigorous growers. Mr. W. has raised this variety for two years, and has never seen a rotten one among them. Mr. Wheeler will please accept our thanks for the donation.

Fine Birds.—During a late visit at Bridgport, Ct., we were much interested with the handsome collection of choice birds, of various species, belonging to Mr. Gideon Thompson, of that place. He has the Chinese golden pheasant, the silver, and the English pheasant, prairie hens, wild geese and swans. He has been very successful in breeding the pheasants, for several years, and furnishes some interesting facts in regard to their habits. He informs us that the golden pheasant lays when one year old—usually about twelve eggs—and sits twenty-one days. The male acquires its full plumage in two years. The silver pheasant lays when two years old—lays the same number of eggs, and sits the same length of time as the former, and the male is the same time in acquiring full plumage. The English pheasant lays at one year old—from twelve to twenty-five eggs—sits *twenty-six* days, and the male gets its full plumage during the first year. Mr. T. finds it very easy to domesticate the golden and silver pheasants; and they appear to be perfectly contented in his yards. The English pheasant, on the contrary, is restless, and always manifests a desire to return to a wild state. He has succeeded in crossing the English pheasant and the common fowl, but has never obtained any produce from the hybrid stock. He has never obtained a cross between either the golden or the silver pheasant, and the common fowl. The pheasants make their nests in the sheds or houses where they roost. Mr. T. takes all their eggs away as fast as laid, and uses those of Bantam fowls for nest-eggs. The males of all the pheasant tribe are very beautiful, but the golden is one of the most splendid of all birds.

The prairie hens before spoken of, have not yet bred.

Mr. T. has kept wild geese for several years, and has bred hundreds; but he states that until this year, he never had one lay before it was four years old. One has this spring, laid, that is but three years old.

The swans are of the mute species, (*Cygnus olor*,) are majestic birds, but have never bred.

These rare birds, with choice kinds of domestic fowls, African and Chinese geese, and several beautiful deer, not only promote the pleasure of the liberal owner, but being at all times to be seen, are objects of curiosity to the public, and are really ornamental to the *town*.

Old Cheese.—By the politeness of E. P. Prentice, Esq., we have received a sample of cheese, *twelve years old*. This cheese was made in Otsego county in 1837, and has been kept in a tin case which wholly excluded the air. It was perfectly sound when taken out, a few weeks since, and is equal, in all the qualities which constitute excellence in "old cheese" to any we have ever seen.

Cleaning Cider Barrels.—A correspondent (B. C. M.) at Sangerfield, N. Y., writes—"In rinsing out cider barrels and other casks, put in two or three trace chains. Shake them well and you will soon have a clean cask."

Farmers Clubs.—We understand that an "Agricultural and Mechanical Club" has been formed in the town of Auburn, the object of which is the free discussion of all subjects pertaining to the interests of mechanics and agriculturists. The officers are John Gaylord, President; Wm. Woods, Vice President; C. Ferris, Secretary; Joseph Swift, Treasurer. The association is considered an auxiliary to the Cayuga Co. Agricultural Society.

Self-Acting Cheese Press.—It will be seen by an advertisement in this paper, that our agent at West Milton, Saratoga Co., has the patent-right of this press for several counties, and is prepared to furnish presses, or to dispose of the patent for certain districts. This press is a favorite one in some parts of the country, and is well worthy the attention of cheese-makers.

The "Double acting Rotary Churn" is advertised in this number. We have received one of the churns, and will speak of its performances when we have had an opportunity to test it.

Black Hawk.—The advertisement of Messrs. Hill, in reference to this horse, will be found in our present number. He has always been held in high estimation by connoisseurs in horse-flesh; but the high prices readily commanded by his progeny, as they arrive at an age to show their superior properties, afford the best evidence of his great value.

Morse's Grey.—It will be seen by reference to the advertisement of this horse, that he is still at his old stand. His stock is well known and esteemed in this vicinity, as good roadsters and fast travelers.

Imported Horse Leopard.—A notice of this horse was given in this paper for February. A more full description will be found in our advertising columns for the present month.

Beans as Food for Animals.—Chemical analysis demonstrates that beans and peas are rich in nitrogen, or nitrogenous compounds; hence it is inferred that they would form a valuable food for laboring animals—the nitrogen supplying the waste of muscular tissue. But some trials which have been made show that they are valuable for animals in other respects. Beans are excellent for fattening sheep, and peas are highly prized for fattening hogs. Beans are not usually relished by hogs; but we have heard of their being ground and the meal being mixed with potatoes and fed to them, with good results. Bean meal has also been given to cows. The writer was acquainted with a farmer in Maine, several years since, who was somewhat noted for the general excellence of his milch cows, and who made it a rule to feed his cows with about a quart of bean meal, each, for two or three weeks before and after calving. The cows appeared to be very fond of it, and the farmer thought it was the best food for the combined objects of imparting strength, and producing a good flow of milk that could be used. A writer in the *Mass.*

Plowman, states that he has lately been feeding a milch cow with bean meal with good effects. We hope experiments will be made in such a manner as to test its value, compared with meal from Indian corn. Mere *conjecture*, without actual trial, is worth but little.

☞ **Caution.—L. E. White.**—The public are cautioned against paying L. E. White for *The Cultivator*, as he has not been authorised to receive subscriptions for the last two years, and never paid for those he was authorised to receive the year previous.

Different crops in alternate rows.—J. G. Chadsey, of Wickford, R. I., made an experiment last year in relation to the cultivation of onions and carrots in alternate rows. The result was, that a piece planted with onions, in rows one foot apart, produced 507 bushels per acre; and the piece planted with carrots and onions in alternate rows, at the same distances as on the other lot, gave 380 bushels of onions, and 774¼ bushels of carrots per acre. The value of the crop on the first-mentioned lot, was $202.80; manure and expense of cultivation, $93.10; giving a nett profit of $109.10 per acre. The piece planted with onions and carrots together, gave an aggregate value of $306.80 per acre; manure and expense of cultivation, $117.59; leaving a nett profit of $189.21. Part of the onions were sold at fifty cents, and the remainder at forty cents per bushel. The carrots sold mostly in the field, at twenty cents per bushel. The advantage of cultivating the carrots and onions together, is thought to be owing to the more ready admission of the sun's rays. The onions are sown six weeks before the carrots, and they mature and are taken off before the carrots shade the ground—the latter making their greatest growth in the ast half of September, and through October.

Dissolving Bones by Steam.—A statement has ately been made to the Highland Agricultural society, n relation to pulverising bones by steam. It was staed that bones of any size could be reduced to a soft mass by this agency alone. A small boiler with a steaming vessel connected with it, capable of standing a pressure of 25 or 30 pounds to the square inch, was all that was required. If the vessel was filled with bones, and subjected to the action of steam above the evel of the boiler (as they will not dissolve if covered with water,) at 25 lbs. pressure for a few hours, they will become quite dissolved—thus saving all the expense of grinding, and the sulphuric acid commonly used, which amounted to double the price of the rough bones. All the bones were so much softened, that the argest pieces found could be easily crushed fine by pressure in the hand. Dr. Anderson, the chemist of he society, thought the steaming would be cheaper han grinding. Prof. Traill thought the steamed bones would be preferable to those dissolved with sulphuric acid, because when the acid was added to bones, there was a destruction, in part at least, of the animal mater. The gelatine, which was of itself a valuable manure, would be saved by the steaming process.

Good Cows.—The statements in regard to the cows which received the premiums at the last show of the Worcester county (Mass.) Ag. Society, showed the ollowing results: Joseph A. Reed's cow, which took ook the first premium, was said to have been a Devon, ive years old; calved the 26th of April. From June 0th to 20th, her milk produced 20¾ pounds of butter; rom September 10th to 20th, 15¾ pounds of butter. Feed, pasture. Samuel H. Flagg's cow, which took he second premium, was of "native" breed. Calved May 15th. From June 10th to 20th, averaged sixteen quarts of milk per day, which yielded 22¾ pounds of butter; from September 10th to 20th, eleven quarts per day, which gave 14¾ pounds of butter. Feed, pasture only, in June; in September, hay at night, (pasture being dried up,) with two quarts wheat meal per day. S. B. Watson's cow, which took the third premium, calved on the 21st of March. From June 10th to 20th, made 22 pounds of butter; from September 10th to 20th, 15 pounds of butter; from April 22d to September 23d, 195 pounds of butter. Kept with other cows in pasture, with no other feed. Neither breed nor age mentioned. Simon Carpenter's cow, which received the fourth premium, was half Holderness, half "native." Four years old. Calved in April last. From June 10th to 20th, made 16½ pounds of butter; from September 10th to 20th, 14¾ pounds of butter.

The Society required that a statement should be made of the weight of butter produced in ten days from June 10th to 20th, and in ten days, from September 10th to 20th.

Profits of Poultry.—Ebenezer Lincoln offered a statement last year, to the officers of the Worcester County, (Mass.) Agricultural Society, from which it appears that on the first of March, 1848, he had thirty-six fowls: that from the first of March to the twenty-third of September, these fowls produced 224¼ doz. of eggs; of this number, the family used their supply—the number not known: 18¼ dozen were used for incubation, from which 171 chickens were raised: the remainder of the eggs were sold for $34.41, and a part of the chickens for $13.48—making his cash receipts, $49.89, besides the chickens on hand.

Premium Crops.—The Ontario, (N. Y.) County Agricultural Society, awarded premiums on crops grown in 1848, as follows: *Wheat*, first premium to John Rankin, 45¼ bushels per acre; second premium, to Jared wilson, 45 bushels per acre; third premium, 31¼ bushels per acre. *Indian Corn*, first premium to Uri Beach, 103 bushels per acre; second premium to John Rankin, 92 bushels per acre; third premium to E. M. Bradley, 83 bushels per acre. *Barley*, first premium, to E. M. Bradley, 60 bushels per acre; second premium to S. B. Dudley, 48 bushels per acre; third premium M. Adams, 45 bushels per acre.

Cure of Scab in Sheep.—A writer who states that he has tried many receipts for the cure of this disease, says he has found none so effectual as the following:

4 oz. Corrossive sublimate.
¼ " Sal ammoniac.
2 " Powdered white arsenic.
¼ lb. Tobacco, cut small and boiled in four or five gallons of water. All the other ingredients to be mixed with the decoction. The animal should be washed all over with the mixture, and it is said that a single application will generally effect a cure.

P. C. S., Tallmadge O., will please accept our thanks—M. E. M. Fitchville, O.: Shall be glad to receive the plans you speak of.

Prices of Agricultural Products.

New-York, April 22, 1849.

FLOUR—Genesee, per bbl., $5.62½a$5.75.—Fancy brands, $6.25a$6.75.

GRAIN—Wheat, per bush.. Genesee, $1.20—Ohio & Missouri, $1. Rye, 57c Barley, 62a65c. Oats, 33a35c. Corn, Northern, 58c.—Southern, 52a56c.

BUTTER—best, per lb., 18a20c.—western dairy, 13a15c.

CHEESE—per lb.. 6¼a7½c.

BEEF—Mess. per bbl., $11 25a12.50—Prime, $8a$8.50.

PORK—Mess. per bbl.. $10 37a$10.50—Prime, $8.50a$8.56.

LARD—per lb., 6a6½c.—grease. 4¼a5c.

HAMS—Smoked. per lb., 6a9½c.

HEMP—American dew-rotted. per ton, $155a160.

COTTON—Upland and Florida, per lb., 6½a7¾—New Orleans and Alabama, 6½a8½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	33a38c.
" half blood do....	31a33c.
" one-fourth blood and common,	29a30c

Remarks.—There is a good home and eastern demand for flour, but nothing doing in the way of export. Pork and beef are in fair demand.

Palmer's Wheat Drill.

IT is an established fact that the drill culture is far superior to any other, and the only safeguard from drouth or "*winter-killing*."

It is also a fact that J. A Holmes & Co., of Brockport. Monroe Co., N. Y., are manufacturing the best Wheat or Grain Drill in the known world, and at the lowest price. Every useful agricultural implement should be afforded at a rate that places it within the reach of every farmer.

To accomplish this, the subscribers have made an arrangement with the inventor, to manufacture on a large scale for the coming season,

PALMER'S WHEAT DRILL

An article combining all the advantages of every other grain drill or planter, in a simple substantial form.

Confiding in the prospect of *Large Sales*, they have determined on selling them at a *very low profit*, making the price of the drill at least *twenty-five dollars cheaper* than any other, capable of performing as much.

☞ We challenge the world to produce a drill equal to it. ☜

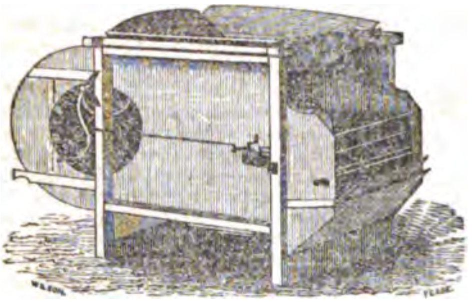
They are made of first rate materials, and in a strong, workmanlike manner, and finished in superior style. Each drill is WARRANTED.

Orders addressed to J. A. HOLMES & CO, Brockport, N. Y., will meet with prompt attention Orders should be sent in or delivered to our authorised agents as early as the month of July, to secure a machine this year.

Brockport, May 1, 1849.—2t. J. A. HOLMES & CO.

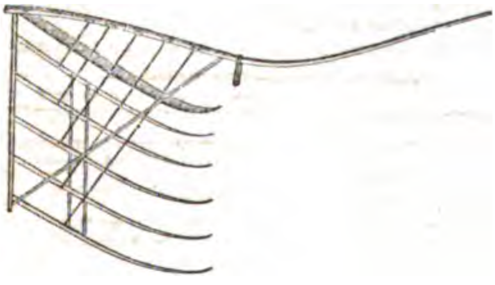
I. T. Grant & Co.'s

PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T. GRANT & CO.
Junction P. O, Rens Co., 8 miles north of Troy.
May 1, 1849.—5t eom.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator

Important to the Farrier, Farmer & Stage Proprietor!

GEO. W. MERCHANT'S CELEBRATED GARGLING OIL.

Unparalelled in the history of Medicine, as the most remarkable External Application ever discovered for Horse's and Human flesh!

FACTS ARE STUBBORN THINGS!

☞ What has been done can be done again! ☜

IGNORANCE of facts and philosophy, however, start at the assertion that any one remedy can possess within itself the virtue of curing many diseases. Experience of more than fourteen years, has nevertheless established the fact, that Merchant's celebrated Gargling Oil, or Universal Family Embrocation, WILL CURE most cases, and relieve all such as *Spavins, Sweeny, Ringbone, Windgalls, Poll Evil, Callous, Cracked Heels, Galls of all kinds, Fresh Wounds, Sprains, Bruises. Fistula, Sitfast, Strains, Lameness. Sand Cracks, Foundered Feet. Scratches or Grease. Mange. Rheumatism. Bites of Animals. External Poisons, Painful Nervous affections, Frost Bites, Biles, Corns, Whitlows, Burns and Scalds. Chilblains, Chapped Hands, Cramps. Contraction of the Muscles, Swellings, Weakness of the Joints, Caked Breasts. &c., &c.*

The following is an extract from a letter dated Utica, April 27, 1846, to G. W. Merchant:

Your Gargling Oil is selling better and better every month. There is in this city a man who has the care of 193 horses, who has used several bottles, and says that it works like a charm, and is decidedly the best medicine he ever saw or heard of.

Signed U. H. KELLOGG.

Get a pamphlet of the agent, and see what wonders are accomplished by the use of this medicine.

Sold by Druggists and Merchants in the United States and Canada. All orders addressed to the Sole Proprietor,

GEO. W. MERCHANT, Lockport, N.Y.
May 1, 1849.—1t.

Fruit and Forest Trees.

SHRUBBERY, Buckthorn and Osage Orange Plants, of one and two years' growth, Strawberry Plants, Grape vines, &c., &c., for sale at the nursery, corner Delaware turnpike and Morton St., Albany.

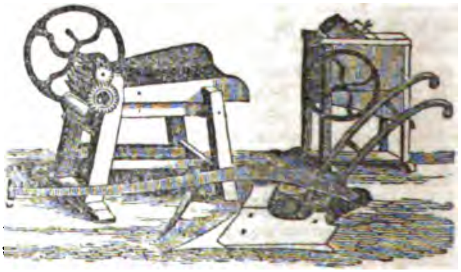
Orders left on the premises, or at H. L EMERY'S Agricultural Warehouse, No. 369 and 371 Broadway, Albany, will meet with prompt attention

Albany, April 1, 1849.—2t.

Osage Orange Seed,

WARRANTED good, and sure to grow if managed according to the directions furnished to purchasers, for sale. Price $25 per bushel, $7 per peck, or $1 per quart; Payment to accompany the orders. Packages can be sent by express during winter, via Cleveland, Buffalo, &c., or via. Wheeling, Baltimore, &c., or via Cincinnati, to all places on the Ohio and Mississippi rivers.

M. B. BATEHAM.
Ohio Cultivator Office, Columbus O., April 1.—2t.



John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.
New-York, Oct. 1, 1848.—tf.

Anthony & Emerson's
DOUBLE ACTING ROTARY CHURN.

THE attention of all Dairymen, and persons interested in good butter, is solicited to an examination of the merits of the above invention.

The proprietors feel confident that, upon investigation and trial, it will be pronounced the most practical and common sense *Churn* ever brought before a discriminating public. The abundant testimonials, the universal approbation, and the spontaneous acknowledgments of all who see the Churn in operation, or examine its principles, furnish ample proof of its merits.

Read the following Notices of the Press.

The operation of this churn before the Farmer's Club in Wilmington, Del, is thus related by Col. J. S. Skinner, editor of the *Plough, the Loom and the Anvil*:

Until dinner was announced, the chief attraction was Mr. Anthony's famous "*Double Acting Rotary Churn*," which Mr. Emerson had brought down from Philadelphia, that the members might have ocular demonstration of its miraculous performance.

Like Maelzel with his chess-player, Mr. Emerson exposed the interior, to show that there was no witch or witchcraft about it—and truly, the whole contrivance seemed to be as simple as a salt-box. Two gallons of fresh milk were thereupon poured into it, and every man pulled out his stopwatch to note its performance—six minutes being allowed. Odds in favor of time Away went the churn, turning as light as a little, old grindstone, in the country, worn down to the size of a breakfast-plate, and behold, at the end of five minutes, the operator took off the cover and exposed the butyraceous particles finely separated from the milk, and ready to be served up and submitted to another sense at the dinner table.

Rotary Churn.—Messrs. Anthony & Emerson are exhibiting a patent Double Acting Rotary Churn, in this city, by which excellent butter is produced in two minutes from sweet milk, a thing previously deemed impossible. It appears to be an excellent machine, and will save the producers of butter an immensity of labor. —*Philadelphia Ledger*.

We recommend to the examination of all interested in good living, the newly invented *Double Acting Rotary Churn*, by Messrs. Anthony & Emerson. One of its best recommendations is its *great simplicity*. It operates on a beautiful principle—the mechanical action of the air—which is mingled with the cream in such a manner, that a thorough separation of the particles takes place, preventing the cream from frothing on the surface, and doing its work with astonishing rapidity, and in the most thorough manner.—*Pennsylvania Inquirer*.

We always take pleasure in recommending to the public, all labor-saving and useful inventions. One of the best which we have seen for a long time, is Anthony & Emerson's Double Acting Rotary Churn. At the churning yesterday at 12 o'clock, good butter was made from sweet milk in three minutes. We understand that the proprietors are rapidly disposing of the rights for the different states, and it seems to afford an admirable opportunity for a profitable investment.—*North American and U S Gazette*.

Anthony & Emerson's Double Acting Rotary Churn, the advertisement of which will be found in another column, is an invention which has attracted a great deal of attention and commanded universal commendation for its simplicity, and the extraordinary rapidity with which it performs its work, producing butter from the milk, in about three minutes time. Those who examine it will be struck with amazement that anything so exceedingly simple should not have been thought of before —*N. Y Courier and Enquirer*.

Double Acting Rotary Churn.—This is one of those simple inventions which are calculated to be very useful, because they are truly labor-saving. We have seen butter made in three minutes from milk bought in our streets, which was not likely to be very pure.—*Daily Sun*

Revolution in Churning—We learn that Messrs. *Anthony & Emerson*, the fortunate Inventors of the *Double Acting Rotary Churn*, advertised in this paper, have opened an office for the disposal of rights and churns, at 77 Fulton st., New York, where they are creating an extraordinary sensation among the dairymen and farmers of the interior, who flock to examine the invention, and who universally agree to its great superiority over any other Butter making affair now in existence. Did we not feel fully assured of the superiority of this great labor-saving invention, we should scarcely refer to it so frequently; but having observed it quite carefully, we heartily recommend it to our agricultural readers.—*American Cour.*

The public are invited to call and examine the machine, and see its utility tested It combines the following valuable qualities:

1st. It produces more butter from the same amount of milk or cream, than the ordinary method, as it does its work in a more thorough and scientific manner.

2d It is the cheapest, simplest and most convenient churn ever invented, embodying the true philosophical principles of butter-making.

3d New milk after being churned, is sweet and suitable for family use.

4th Instead of feeding the calf with milk directly from the cow—churned sweet milk will answer every purpose. By this process, the butter is all profit!

5th. It is a great labor-saving machine. By simply turning a crank, butter is produced from fresh milk in from three to six minutes, and from cream in less time. (It requires longer time to produce butter if the cream is cold. The best temperature is 65 degrees)

6th. It acts upon philosophical principles.

The butter is produced by the introduction of the *Mechanical and Chemical Action of the Air.* By the revolution of the dasher, the air is forced between the globules of the cream upon the one side, and the production of a vacuum on the other, sucks up the particles of cream by the cavities causing a breaking of the globules, and a separating of the *fatty* or *butter* particles of the cream from the buttermilk, or more fluid portions—producing more butter from the same amount of milk or cream than any other churn, for the simple reason that it does its work in a more thorough manner

We offer it upon the following terms: If the Churn does not prove as recommended, it may be returned, and the money will be refunded

We have constantly on hand, and for sale, five different sizes, prices $3, $4, $5, $6 and $12, capable of churning at one time, 1½, 3½, 5½, 10 and 20 gallons of milk or cream. Also, churns of any size made to order.

Exclusive county rights to manufacture and sell in the States of New York and New Jersey, for sale at about the rate of one hundred dollars for each 10,000 inhabitants

A churning takes place every day, at 12 o'clock, at our Warehouse, No. 2 John St, corner of Broadway, where every one interested is invited to call.

A discount of 25 per cent. is allowed to the trade

All orders, *postage paid*, addressed to the subscriber, will be promptly attended to. T. DOUGLAS, Agent,

May 1—1t* No. 2 John St., Cor of Broadway, New York.

Morgan Horse Black-Hawk.

THIS well-known and popular stallion will stand this season, at the stable of the subscribers; terms, $15 the season, payable in cash, or a satisfactory note on demand with interest. For particulars in regard to pedigree and performances, see large bills, and previous volumes of *The Cultivator*. D. & D. E. HILL.

Bridport, Vt., May 1, 1849.—1t.

A Sultan from the English Stud.

Imported Thoroughbred Race Horse Leopard,

WILL be kept throughout the year, for the improvement of breed, at the stable of J. Lapham, in the Union, 5 miles northwest of Keesevile, except during the months of May and June. Beginning the first week in May, he will be at J. Lapham's from Monday until Friday; on Saturday, he will be at Keeseville. The succeeding week, he will be in Champlain Village on Wednesday and Thursday, and in like manner each alternate week in May and June.

THE LEOPARD is a dark brown, standing over 16 hands high, and weighed over 1100 lbs. last year. Being only 4 years old at the time he was shipped, and lame in consequence of treading upon a small round stone at the last race he run, his lameness and the severity of the voyage impeded his growth; yet from the improvement he is making, it is confidently believed that he will attain to a weight of 1200 lbs. He was purchased of the Duke of Bedford for the reduced price of $1250, on account of his having despaired of his ever recovering from the lameness, otherwise he would not have sold him for four times that amount. The lameness was confined to the cartilage of the ankle, which has subsequently become entirely sound, and free from defect or blemish.

THE LEOPARD

Has won, at different races, about $10,000. He has no cross of common or impure blood since the date of the American Revolution. It is well known that the best English Roadsters and Hunters are produced by crossing common mares with full blood Racers, therefore, upon principles of judicious breeding, crosses with Morgan and Blackhawk mares, or Norman and French mares, will bring the best horses for all work. Persons wishing the service of the horse are requested to call and examine and satisfy themselves with regard to his peculiar merits.

PEDIGREE—Leopard was got by Liverpool out of Sneaker by Camel, (the sire of Touchstone in 1834, and Launcellot in 1840, both winners of the Ledger.) her dam by Selim (winner of the Ledger in 1811.) out of Hare, by Sweetbriar. Liverpool was got by Prime Minister out of Rosamel, bred by Mr. Van Sittart in 1813, got by Reubens, her dam Momentilla, by a brother of Repeater, (Diomed Imperator by Camel, by Whalebone.) out of Selim, the mare bred by Mr. Ewles in 1812, her dam Maiden by Sir Peter, (sire of the winners of the Ledger) by Phenomenon sire of Ambidexter, (winner of the Ledger in 1790) out of Matron by Florazel, (sire of Tartar in 1792 and Attila in 1793, both winners of the Ledger,) out of Maiden by Matchum, sire of Hultonduise, winner of the Ledger in 1778. (See English Stud Book)

CERTIFICATES.—I certify upon my honor that my stud horse Leopard is 6 yrs. old, was got by Liverpool out of Sneaker by Camel; was the property of his Grace the Duke of Bedford, and that I purchased the said horse of his Grace, for £250 Sterling.

LIONEL FITZGERALD, Cornet Queen's Light Dragoons.

I am convinced that the above statement is true in every particular. THOMAS WALTER JONES, Captaincy Q. L. D.

PERFORMANCE.—The following is but a partial statement, being taken from memory, the calender being in Montreal. Leopard won the Produce stakes, (Sweepstakes) of £500 on the New Market Heath, 4 miles, in June, 1846. Also the same year. Sweepstakes of £600 at Ascot Heath, 4 miles, besides various other matches, being at the time the property of the Duke of Bedford. Also ran for the Queen's plate at New Market, going 3 miles with 8 stone 10 lb. on his back (122 lbs) in 5 minutes and 48 seconds. All of which is recorded in the racing calender for 1846.

Odletown, Oct. 7, 1848. LIONEL FITZGERALD,
Cornet Queen's Light Dragoons.

TERMS—$10 for a single service, $2 50 for each repetition; $20 the season, and $25 for insurance; it being at the option of the man who tends to accept or reject individual animals. Accidents to mares will be at the risk of their owners. Mares from a distance will be pastured at J. Lapham's, and receive good care for a reasonable compensation. OLIVER K. LAPHAM & CO.,
Peru, N. Y., May 1, 1849.—1t. Proprietors.

Wendell's Mottled Bigarreau Cherry.

Described page 199, Am. Journal of Agriculture and Science.

THE subscribers offer for sale this spring, trees of the above new and choice variety of Cherry so much sought after by the admirers of this choice fruit. Price $1.

Also, their usual supply of

FRUIT TREES

viz: Apples, Plums, Pears, Peaches, Cherries, Apricots, Quinces, extra size. European Mountain Ash, and other Ornamental trees.

A liberal discount made to those who purchase in large quantities. WILSON, THORBURN & TELLER,

April 1.—2t. Nurserymen, Albany.

Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample T. C. PETERS & BRO.

Buffalo, Dec 1—6t.

The old Morgan Gifford,

THE highest blooded Morgan Stallion now remaining, will stand this season at the stable of F. A. Wier, in Walpole, N. H.

Terms $25, $5 of which to be paid at the time of service, and the remaining $20 if the mare proves in foal.

Pasturage furnished as usual.

FRED. A. WIER, Agent for the Proprietors.

March 1, 1849.—5t.*

The Genuine Morgan Horse

GENERAL GIFFORD, will stand the ensuing season, on Mondays and Tuesdays, at the stable of Geo. A. Mason, 2½ miles north-east of Jordan; Wednesdays, Thursdays and Fridays at the stable of D. A. Munro, in Camillus; on Saturdays, at the stable of John C. Munro, in Bellisle.

Terms, $10 to insure. Mares that are not placed directly in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers, at 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and style of action, General Gifford more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits.

General Gifford was got by the Gifford Morgan, his dam a Morgan mare. A full description of the origin of the Morgans, and the pedigree of Gifford Morgan, may be found in the Cultivator for 1846, p. 19. MUNRO & MASON.

April 1, 1849—3t.

The Imported Horse Consternation

WAS bred by Mathew Hornsey, Esq., of Stitenham, Yorkshire, England, in the year 1811. He was imported by C. T. Abbot, Esq., in the year 1815. He is now owned by J. B. Burnet, Esq., of Syracuse, N. Y., and will serve a limited number of mares the ensuing season, at his own stables, near the village of Geddes, two miles west of Syracuse. The very best pastures, with plenty of water and the most secure fences will be provided for mares sent from a distance, at two shillings and six pence a week. No mare taken except at the risk of the owner.

Consternation is of a beautiful, unfading dapple brown color—stands 15 hands and 3 inches high, and is remarkable for vigor of constitution, uncommon development of bone and muscle, and an intelligent kind docile position He is compact and short-legged, yet of a rangey and majestic figure. His chest and flank are remarkably full and deep. His action is easy and graceful, yet proud and commanding.

But what is more important perhaps than either, he is entirely thorough-bred. There is no taint of mongrel stock in his long line of ancestry. Indeed there is no horse living, with a more distinguished or genuine pedigree.

His ancestors were of unusual size and strength, and every one of them of good disposition and free from blemishes. His pedigree is briefly as follows, viz:

By Confederate—dam Curiosity, by Figaro—her dam by Waxy; Confederate was bred by Earl Fitz William, got by Comus—by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

This pedigree is in every particular true and genuine, and can be abundantly established by reference to certificates and volumes of the Stud Book in the possession of the subscriber.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Oneida Castle: Henry Rhodes, Trenton; A. Ford or John Best, Rome, and to farmers generally in that vicinity.

Terms $6 in advance, and $5 additional if the mare is got in foal. April 1.—3t. J. B. BURNET.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth. and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers, Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud, and well branched, including the very best sorts. Red Antwerp, Fastolff, Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c. Dahlias, including the new fancy sorts.

Descriptive priced lists sent to post paid applicants.

Feb. 1—4t. B. M. WATSON

Short-Horns at Auction.

THE subscriber being about disposing of 50 acres of his farm, for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one-half of his present herd,) at his farm, 2½ miles from this city, on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year old and three year old heifers and cows, and 11 young bulls, from 10 months to 2½ years old. Great care has been observed and considerable expense incurred, in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the New York State Ag. Society, and the N. Y. American Institute, attest the estimation in which it is held, wherever it has been exhibited for competition. About eight head of the above cattle, are part of a purchase made last May, of E. P. Prentice, Esq., of Albany, embracing all the Short Horns of that gentleman, and were the product of the four selected cows he retained at his public sale, and possessed much of the blood of the herd of Mr. Whittaker, of England, from whom Mr. P. made importations of stock. The other portion of the young stock inherit much of the blood of the herd of T. Bates, Esq. of Yorkshire, Eng. from whom my importations have been made, being one and two crosses of the imported bull Duke of Wellington, and the premium bull Meteor. All the heifers of suitable age, are or will be in calf by these bulls.

For the information of Southern gentlemen, who may be desirous of introducing Durham stock in that region, and who may entertain an opinion, that that climate is not congenial to their successful propagation there, I submit the following extract of a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, January 25, 1849:

"The bull you sold Col. Hampton, of this State, gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 of his get, now in his yard. They are the most superb yearlings ever bred in the South, and your stock will not suffer from him." The pedigrees of the animals will be issued and circulated a month previous to day of sale. A liberal credit will be given—say 6 to 12 and 18 months, if desired The particulars will be given in the pedigree list. GEO. VAIL.

Troy, April 1, 1849.—3t.

Agricultural Ware House,

193 Front Street, New York.

THE subscriber, manufacturer and dealer in Agricultural Implements, offers for sale a large assortment of PLOWS, embracing over 200 different sizes and patterns, among them the superior *Premium Plow*, which received the highest premium of the American Institute in 1848, and of the great State Fair in 1847.

This Plow has no equal for lightness of draft, and for all purposes, is recommended with full confidence as being the best in use

He has also the Centre Draft and Eagle Plows, which will be sold at the lowest rates.

Also, Cultivators, Straw Cutters, Corn Shellers, Fanning Mills, Grain Cradles, Corn and Cob Mills, Portable Grist Mills, Horse Powers, Threshing Machines, and a general assortment of Farming and Gardening Implements, all of which will be sold at extremely low prices.

Brass and Iron Wire Cloth Seives, Screens, &c.

Bone Dust and Guano. JOHN MOORE,

April 1.—2t. 193 Front street, New York.

Portable Self-Acting Cheese Press.

Patented August, 1847, *by Chester Stone.*

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it ay be graduated as desired. The principle is admirably adapted packing flour into barrels and other uses. It acts on a double ver purchase, the article pressed being the *power*; or in other ords "The cheese presses itself." Its weight is 70 to 100 lbs., ccupies but little room, moved on castors or small wheels, and is old at only $7 to $10, according to size. Already in extensive e in the western part of the State, and only need to be seen to e approved. For presses or exclusive rights to manufacture and ll them in any parts of the counties of Saratoga, Washington, ensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Farm for Sale.

THE subscriber will sell his farm of 300 acres, situate near the centre of the town of Hillsdale, in the county of Columbia, nown as the

MCKINSTRY PLACE,

aving been possessed by that family about a century, lying adjacent or contiguous to the route of the Harlem Railroad, and upon which there are 2 good and convenient dwelling houses, one a recently built cottage, and barns, sheds, lofts, and numerous out houses, two wells of pure soft water of a superior quality, excellent orchards of grafted fruit, fine stone wall fences, some first rate fields or any kind of grain, about 45 acres of meadow land, and about 0 acres of wood land, well watered by springs; three small treams run through it, the head waters of the Roeliff Jansen's Kill or Creek rendering it a desirable farm for grazing, and valuable to practical farmers for other purposes of husbandry. It is capable of being divided into two good farms. Title made unquestionable by the undersigned, with the aid and assent of Judge ugustus Tremain, who now resides on the premises; land now worked and occupied by Mr. James Darrow. The farm is now well stocked with Devonshire cattle, and a choice flock of Saxon heep, which, together with the farming utensils, will go with the ld Homestead, if the purchaser wishes.

JUSTUS McKINSTRY.

If desired, one-third or one half of the purchase money can remain on bond and mortgage for a term of years.

Hudson, April 1.—2t.*

Important to the Public.

HORSE AND CATTLE MEDICINES.

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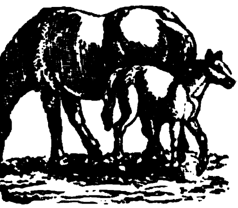

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COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Veterinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

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April 1.—2t.

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This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

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PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

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NOW IN THE PRESS,

TO BE PUBLISHED BEFORE THE CLOSE OF THE MONTH,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

☞ The publication of this work has been delayed by causes beyond the control of the author and publisher. It may yet be some weeks before it will be issued.

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May 1, 1849.—3t.

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THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE FOURTH VOLUME OF THE HORTICULTURIST commences on the first of July, 1849.

The Publisher, at the close of the third volume, desires to return thanks for the patronage bestowed on this work. It has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. Its influence on the progress of Gardening, and the information in matters of Rural Taste, is already strikingly apparent. Its extended and valuable correspondence, presents the experience of a large body of the most intelligent cultivators in America, and the instructive and agreeable articles from the pen of the Editor, make it equally sought after by even the general reader, interested in country life.

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THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

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LUTHER TUCKER & SANFORD HOWARD, Editors.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, JUNE, 1849. VOL. VI.—NO. 6.

Arboriculture.

Cultivation and Preservation of "Wood-Lots."

EDITORS OF THE CULTIVATOR—I can stand it no longer. The inconsiderate clearing of the wood-lands of New England by our fathers, without regard to the selection of those lands suitable for arable and grazing purposes,—finds an apology in the fact that forests, generally, were an incumbrance to them. The greater thoughtlessness and improvidence of their sons, however, in still persisting in the practice, while we have more lands already cleared than a proper and profitable husbandry is bestowed upon, is, to me, a painful and surprising matter. Besides being ruinous to the present owner, it is a perfect "devil take the hind-most" policy for the sons. Go where we will, we are compelled to look upon rough inaccessible lands and tops and acclivities of hills, which have been swept of their natural covering and fertility, and turned into pastures affording but scanty returns for the hard labor of the animals *attempting* a subsistence thereon, and still smaller returns to the proprietor. There is scarcely a farm in this section but has acres of this kind of land that would have been worth five times, yes, in many cases, ten times as much as they now are, had a second growth of wood been permitted to run up on them.

The operation of clearing and burning a large tract of hill-side, woodland has been going on within my observation for a few years past. It has been of the genuine, old-fashioned sort. A large piece is chopped over, each winter, and the wood and timber marketed. The next August, a heavy fire burns up the vegetable mould on and near the surface, and the ashes left, operating as a powerful and unnatural stimulus on so light a soil, only cause it to give up its organic matter, its fertility, the more speedily. Rye is sown, and yields so fine a crop that another of the same kind is put in the next fall, and *possibly* a light sprinkling of grass-seed with it. At the end of five years, the land is so far exhausted, that five acres will not keep an old sheep alive, through the summer. Then again, a valuable tillage-field, which has had the protection of this wood from bleak winds, is now exposed to every northern blast, which, in this climate, is a serious consideration. Had the inconsiderate owner just taken off his wood, and "therewith been content," leaving his hill-side to be covered with another growth of trees, he could have sold it to-day, if he wished, for twice what it will now bring.

Ten years ago, I cut the wood off a long stretch of side-hill, and in my inexperience, burnt over a portion of it for pasturage. The remainder was left to grow up again to wood. Many of the young trees are 6 to 8 inches through; they are all very straight and thrifty, and I value one acre of this land more than five acres of that which is in pasture. I shall not again permanently clear up my steep hill-sides.

At the solicitation of a railroad friend, a short time since, I accompanied him into the country directly south of this, to examine and estimate the value of some "wood-lots." I was forcibly struck with the amount of rugged, barren land, inaccessible for agricultural purposes, which had been thrown into open country, even by the present owners. Had a second growth of wood been permitted to run up on the land, instead of subjecting it to the burning and cropping process, it would have been now worth far more to the owners;—for a railroad is tapping that country, with its large and clamorous demands for wood and timber. Riding along with an old inhabitant of one of the towns visited, he pointed out a wood-lot which was cut over twenty years since, and suffered to grow up again to wood, contrary to the usual custom. It was sold at auction, a short time since, for $3,400. It would not have brought over $800, had it been in pasture from the time it was cleared.

Warm hill-sides, having an eastern or southern slope, send up a second growth of wood with great rapidity. Although they may not eventually, support so heavy a growth as strong level land, they will yet produce all the wood they are capable of sustaining, much sooner. A friend directed my attention the other day, to a tract of land, with an eastern slope, in a neighboring town, which was cleared of an original growth of wood, 25 years ago, and left to itself to produce another growth from the sprout. The land, with its present standing wood, was appraised a year or two since, at $50 an acre. Ten dollars an acre, is all that similar land, in pasture, in that vicinity, has ever been worth. By the application of a little arithmetic then, we find that the increase of this second growth of wood has been equal to 16 per cent. interest, per annum, on the worth of the land, without a dollar's expense for the cultivation,—that is, $10, at 16 per cent. simple interest, for 25 years, amounts to $40; to which add the principal, the worth of the land, and we have $50, the appraised present value per acre.

Take another view. The importance of a due proportion of wood in equalising moisture, and preserving the constancy of our small springs and brooks, as well as restraining, in a great measure, the sudden rise and overflow of our rivers, is well known to observing men. Several fine springs and little brooks, which were familiar friends in boyhood, have either entirely disappeared, or are only seen for a season in the spring.

"In wet seasons, the decayed leaves and spongy soil of wood lands retain a large proportion of the falling rains, and give back the moisture in time of drouth, by evaporation, or through the medium of springs. They thus both check the sudden flow of water from the surface into the streams and low grounds, and prevent the drouths of summer from parching our pastures and drying up the rivulets which water them. On the other hand, where too large a proportion of the surface is bared of wood, the action of the summer sun and wind scorches the hills which are no longer shaded or sheltered by trees, the springs and rivulets that found their supply in the bibulous soil of the forest disappear, and the farmer is obliged to surrender his meadows to his cattle, which can no longer find food in his pastures, and sometimes even to drive them miles for water. Again, the vernal and autumnal rains, and the melting snows of winter, no longer intercepted and absorbed by the leaves or the open soil of the woods, but falling everywhere upon a comparatively hard and even surface, flow swiftly over the smooth ground, washing away the vegetable mould as they seek their natural outlet, fill every ravine with a torrent, and convert every river into an ocean."*

Several successful attempts have been made within my observation, in improving rugged and exhausted lands by planting them out to trees. Within sight while writing, is a knoll that has been completely renovated by a plantation of the white locust. It was originally, a coarse worthless gravel, barren of herbage of any kind. I remember that the proprietor was laughed at by his neighbors for attempting to grow trees on his barren gravel. The locusts got root however, and although their growth was slow and feeble, they gradually formed a soil by the annual shedding of their leaves; and as the soil became thus strengthened, their growth became more vigorous, new shoots sprang up in all directions from the roots; and after awhile, clover and other grasses, began to appear on the open ground. I have been curious to observe the gradual improvement of this land. Last summer I noticed that the grass was very luxuriant, and would have yielded at the rate of a ton or more of hay to the acre, in the open spots. The locust wonderfully endows a poor soil with new energy and fertility. It seems to make its demands for nourishment more largely upon the atmosphere than any other tree, and gains foothold in soils absolutely barren of fertility. Then again, its leaves are small, with very rough edges, lying perfectly still where they fall, while those of most other trees are blown about by the winds, collecting in hollows or in large heaps.

In my notice of Mr. Rice's farming, last year, I remarked that he plowed up a large tract of unproductive hill-side, several years ago, and planted it with chestnuts, in rows four feet apart every way. The first sprouts coming up rather crooked and scrubby, he went over the field and cut them down close to the ground, which caused new sprouts to shoot up straight and vigorous. The trees are very thrifty, completely shade the ground, and grow more and more rapidly as the soil becomes strengthened by the annual deposit of leaves. So well satisfied is he with the experiment, that he is now placing other worthless lands in a similar course of improvement.

The late Hon. John Lowell, the first and most zealous advocate for improvements of this kind in New England, planted three acres of waste land on his estate at Roxbury, Mass., to a variety of forest trees,—the whole value of the land not being $10 per annum.

In a communication upon the subject, he says, "The land was about half of it plowed and kept open with potatoes for two years, and then abandoned to the course of nature. The pines were taken up out of the forest with great care, not more than five feet high. Wherever I had the cupidity or impatience to introduce a larger tree, I either lost it or it became sickly. In some places I planted acorns, and as to my hard-wood forest trees, transplanted from the woods, finding they looked feeble and sickly when they shot out, I instantly sawed them off at the ground or near it. This required some resolution, but I have been abundantly paid for it.

"The result of this experiment is this, that in a period of from thirteen to fifteen years, I have raised a young, beautiful and thrifty plantation, comprising, almost every variety of tree, which we have in Massachusetts, which are now from twenty-five to thirty-five feet high, and some of which, the thriftiest white pines, actually measure from nine to twelve inches in diameter. The loppings and thinning out of these trees, now furnish abundance of light fuel for summer use, and upon as accurate a calculation as I am able to make, I am convinced that the present growth, cut down at the expiration of 14 yrs. from the time of planting, would amply pay for the land at the price it would have brought."

Mr. S. Brown, in a communication to the *Boston Cultivator*, says—"I have one acre of land which, 30 years ago, was not worth more than ten dollars; I have no recollection of there being a tree upon it, with the exception of one apple tree, and some scattering bushes; the appearance of the soil was such as to forbid any attempt at cultivation, and my cattle have rambled over it from that day to this; in the mean time, the young pines voluntarily sprung up and became a forest, and now, I would not thank any man to pay me $60 for the standing wood on that acre. Now, if any man can tell me how to improve such land to better advantage, I would thank him for the information."

Mr. Webster has a great variety of thrifty promising young forest trees on his estate at Marshfield, which he has raised by planting the seeds. There are several reasons for preferring this mode of cultivation to that of transplanting. The expense of planting seed is less than that of transplanting trees; the trees will be straighter and more vigorous; they neither require staking nor watering; and at the end of eight or ten years they will ordinarily have acquired a much larger growth than trees transplanted at the same time.

The success in attempting improvements by planting waste or exhausted lands to wood and timber, will very much depend upon choosing those kinds of trees that are most naturally adapted to the soil. Prof. Johnston has some very interesting remarks upon this point, a part of which I will venture to quote. Speaking of the improvements going on in Europe, in renovating exhausted lands by planting trees, he says:

"The most precise observations on the subject with which I am acquainted, are those which have been made in the extensive plantations of the late Duke of Athol. These plantations consist chiefly of white larch, and grow upon a poor hilly soil, resting on gneiss, mica-slate, and clay-slate. In six or seven years the lower branches spread out, become interlaced and completely overshadow the ground. Nothing, therefore, grows upon it till the trees are 24 years old, when the spines of the lower branches, beginning to fall, the first considerable thinning takes place. Air and light being thus re-admitted, grasses spring up and a fine sward is gradually produced. The ground, which previously was worth only 9*d*. or 1*s*. (rent ?) per acre as a sheep pasture, at the end of 30 years becomes worth from 7*s*. to 10*s*. per acre.

"On the soil planted by the Duke of Athol, the larch shot up luxuriantly, while the Scotch fir lingered and languished in its growth. Thus the quantity of leaves produced and annually shed by the former was vastly greater than by the latter tree. Had the Scotch fir thriven better than the larch, the reverse might have been the case, and the value of the soil might have been increased in a greater proportion by plantations of the former tree.

"In regard to the relative *improving power* of the several species of trees, the most rational natural rule by which our practice should be guided, seems to be contained in these three propositions;—

---

* Address of Hon. Geo. P. Marsh.

1. That the soil will be most improved by those trees which thrive best upon it.

2. Among those which thrive equally, by such as yield the largest produce of leaves, and—

3. Among such as yield an equal weight of leaves, by those whose leaves contain the largest proportion of inorganic matter—which bring up from beneath, that is, and spread over the surface in largest quantity, the materials of a fertile soil.

"The mode in which the lower branches of the larch spread out and overshadow the surface is not without its influence upon the ultimate improvement which the soil exhibits. All vegetation being prevented, the land besides receiving a yearly manure of vegetable mould, is made to lie for upwards of twenty years in uninterrupted naked fallow. It is sheltered also from the beating of the rain drops, which descend slowly and gently upon it, bearing principles of fertility instead of washing out the valuable saline substances it may contain. Beneath the overshadowing branches of a forest, the soil is also protected from the wind, and to this protection Sprengel attributes much of that rapid improvement so generally experienced where lands are covered with wood. The winds bear along particles of earthy matter* which they deposit again in the still forests; and thus gradually form a soil even on the most naked places."

Thousands of acres of waste lands in New England, ntirely unprofitable to the owners and to community, night, by judicious planting with trees, be redeemed rom their sterility,—thus adding, in effect, to the territorial extent as well as wealth of the country; besides n many cases five-folding the value of individual estates hus planted. Numerous instances might be given in roof of this statement.

It is worthy of separate and particular consideration hat our country is fast becoming penetrated in every irection by railroads, whose consumption of wood is so normous that we must look well to our forests, or they ill vanish. The facilities of transportation which they fford will induce a greater demand for lumber and uff for turning purposes, for the manufactories near he sea-board. Thus new and greater inducements r the cultivation and preservation of woodlands are arly becoming developed, urging our farmers to wake to the importance of this subject.

In treating this topic at this time, I have chosen to ve a somewhat desultory statement and citation of cts and principles which are so palpable as to come ithin the observation of every one, rather than a meodical and formal essay;—hoping by this means the ore surely to attract the attention of the practical rmer. F. Holbrook. *Brattleboro', Vt. Feb.* 1849.

Different Varieties of the Ox.

The Middle-Horns.

The Hereford Breed.—As this valuable breed has en introduced, and is increasing in several sections of country, we offer a few remarks in reference to its tory and qualities.

We have mentioned in a previous chapter, that the refords are a branch of one of the original stocks of itain. They have been known in certain districts for indefinite period; but it was not until after the mid of the last century that any systematic attempts re made to improve the breed. The first effort of s kind, of which we have any authentic account, was made by Benjamin Tomkins, of Wellington-Court, Herefordshire. He commenced, according to Prof. Low, about the year 1766, with two cows, which, previous to his purchase of them, had often attracted his attention on account of their singular aptitude to fatten. Mr. Eyton, the compiler of the "Herd-Book of Hereford Cattle," states that he was informed by the family of Mr. Tomkins, that one of the cows "was a grey, and the other a dark red with a spotted face." The former Mr. T. called *Pigeon* and the latter *Mottle*. It appears that Mr. T. kept two families from these two cows—one of a grey color, called the Pigeon branch, and the other of a red color, with white or mottled face, called the Mottle branch—and they have been continued to this day. The Rev. J. R. Smythies, of Lynch-Court, Herefordshire, a gentleman, who for a long period was distinguished as a breeder of Hereford stock, speaking of the two families alluded to, in a late number of the *Mark-Lane Express*, says—"the grey ones are considered the oldest breed, and by many people, considered the best; from long experience, I am inclined to think they possess more constitution and more quality than the white-faced ones, and generally more size than the mottled-faced ones."

From the two cows mentioned, Mr. Tomkins bred a large herd; from which he supplied other breeders with choice animals, during his lifetime, and shortly after his death in 1819, the entire stock was disposed of at public auction. The prices obtained deserve notice. Fifty-two animals—among which were twenty-two steers, from calves to two-year-olds, and two heifer-calves,—brought the aggregate sum of £4673 14s.—averaging £99 17s. 6d. ($449.37½ each.) One bull sold to Lord Talbot for £588, and several cows and heifers brought £215 to £273 each. This stock was purchased by breeders in different parts of the kingdom, and laid the foundation of many eminent herds. (See Herd-Book of Hereford Cattle, appendix, pp. 1 to 23.)

Another noted early breeder of Herefords was Mr. Tully, of Huntington, near Hereford. His were chiefly of the grey stock; and Mr. Smythies, in the article above referred to, states that their descendants are still known as "the Huntington breed."

Mr. Smythies was for forty years, one of the largest breeders of Hereford cattle in England—rearing, as he states about seventy calves yearly. He purchased his first stock in 1802, of Mr. Tully of Clirow, a relative of the before-named gentleman of this name. He was induced to adopt this stock by the recommendation of the celebrated grazier, Mr. J. Westcar, of Creslow, near Aylesbury. Mr. Smythies relates, that meeting Mr. Westcar at the Hereford fair, the latter remarked —"This is the *fiftieth* October fair I have attended in this town, without missing one. I graze five hundred oxen every year, and the best beasts I ever fed, were bred by Mr. Tully of Huntington, and Mr. Skegrue of Stretton Court, both near Hereford."

Mr. Smythies closed business in 1843, at which time he sold at public auction, 131 head of cows, heifers and bulls. He had a previous sale in 1823, at which sixty six head of breeding stock were sold. We have not the prices obtained at either sale.

The late Mr. John Price, of Poole-House, Worcestershire, commenced breeding Hereford cattle in 1814, with several animals purchased of Mr. Tomkins above mentioned. He continued to breed on an extensive scale till 1841. In October of that year, he disposed of his stock at public sale. Ninety-nine animals—cows heifers and bulls, brought an aggregate of £5328—averaging £53 16s. 4½d. each. At a previous sale, in 1816, he sold one hundred and twenty-six head of Herefords, comprising fourteen bulls of various ages, six bull calves, one hundred and six breeding cows,

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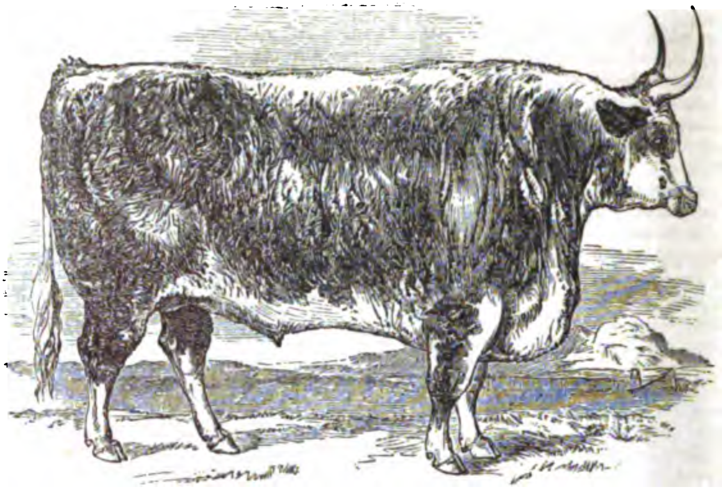
* It has been observed that on spots purposely sheltered from wind and rain on every side, the quantity of dust that is collect- when *pressed down*, is in three years equal to one line, *or in* 36 *rs, to one inch in thickness*—Sprengel.



54—HEREFORD OX.

heifers and calves, which together brought £6850 12*s.* 6*d.*—averaging £54 8*s.* 2*d.* each.*

We deem it important to state these prices, that it may be seen how they compare with those of other breeds. Numerous other sales of Herefords might be cited, at which prices about as high as the foregoing, were obtained.

Some of the principal breeders of Herefords in England at the present time, are W. F. HOBBS, JOHN and WM. HEWER, Lord TALBOT, Sir H. HOSKYNS, S. ASTON and Sir FRANCIS LAWLEY. In reference to the stock of the two last-mentioned breeders, Mr. SMYTHIES, in the *Mark-Lane Express* of Feb. 5th, last, makes the following challenge in order to test the relative merits of the Short-horns, Devons and Herefords:

"I will show one hundred Hereford beasts, which were the property of Sir Francis Lawley, Bart., on the 1st of January, 1849, and the same number which were the property of Mr. Aston, of Lynch Court, on the same day, against an equal number, the property of any two breeders of Short-horns or Devons in any part of Great Britain, on the same day, for one hundred sovereigns. I am willing to leave the decision to the three judges at the last Smithfield show, two of whom are unknown to me, even by sight."

Mr. S. also makes the following offer:—"I am also ready to place four Hereford calves, on the 1st of May next, in the hands of any respectable grazier in the midland counties, against four Short-horns and four Devons; no calf to be more than four months old on that day; the twelve calves to be turned to grass together, to have nothing but grass till the 20th of October following, then to be put into stalls, and to be fed as the grazier thinks proper; but the food to be weighed to each lot, till the following May, when they shall be again turned to grass, and have nothing but what they get there till the 1st of October; then to be again taken into the stalls, and the food weighed as before; the whole to be shown as extra stock at the Smithfield Show, at the bazaar, and after the show to be slaughtered, the four beasts that pay the best to be the winners."

The predominant characteristic of the Hereford breed of cattle, is a disposition to fatten.* It is for the beef chiefly, that they, as well as the "Herd-Book" short-horns, are bred in England. In dairy properties, the Herefords are believed equal to any high *bred* breed—all such breeds being doubtless inferior to some others in which the milking property has received more attention in breeding.

The show of fat cattle by the Smithfield Club, London, is the only exhibition of note in Britain, where the different breeds are brought into direct competition with each other. Here the Herefords and Short-horns have long been rivals, and have contested with various success. In looking over most of the results for a period of thirty-nine years, we think it may be assumed that in the classes for oxen and steers, the Herefords have taken more prizes than any other breed. For the prizes on fat cows, they have been less successful than the Short-horns.

As an example of the success of a single competitor at Smithfield, it may not be amiss to mention that Mr. Westcar, abovementioned, took the first prize in class I., (oxen) in 1810, 1812, 1813, 1814, and 1815. The animals in every case were Herefords. The dead weights of the four first were as follows—quarters, hide and loose tallow included, 2147; 2059; 1953; and 2141 pounds. We have not the weight of the fifth. Mr. Smythies states that Mr. Westcar sold, at different times, twenty Hereford oxen, "for two thousand one hundred and fifty pounds." The statement was proved by an extract from Mr. Westcar's books, giving the date of sale, the name of the butcher they were sold to, and the several sums paid for them. "Six of them," it is said, "were sold in one deal to Mr. Giblet, of Bond-street, for six hundred pounds."

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* In 1839, Mr. Price gave a public challenge to show twenty cows and a bull of his own breeding, against the same number of any one person's breeding, and of any breed—open to all England—but it was not accepted.

* In a paper by E. F. WELLS, published in the *Farmer's Magazine* for February, 1848, the following sensible remarks are made in regard to the properties of Herefords:—"It is allowed on all hands, I believe, that the properties in which Herefords stand pre-eminent among the middle-sized breeds, are in the production of oxen, and their superiority of flesh. On these points there is little chance of their being excelled. It should, however, be borne in mind that the best oxen are not produced from the largest cows, nor is a superior quality of flesh, such as is considered very soft to the touch, with thin skin. It is the union of these two qualities which often characterises the Short-horns; but the Hereford breeders should endeavor to maintain a higher standard of excellence—that for which the best of the breed have always been esteemed—a moderately thick, mellow hide, with a well-apportioned combination of softness with elasticity. A sufficiency of hair is also desirable, and if accompanied with a disposition to curl moderately, it is more in esteem; but that which has a harsh and wiry feel, is objectionable."

The beef of the Herefords is of fine quality, and ommands a price in the English markets equal to any xcept that of the Highland Scotch. The following xtract from a late number of the *Agricultural Gazette*, giving the price current at the Smithfield Market, hows about the usual range:

Per stone of eight pounds.	s. d.		s. d.
Best Scots, Herefords, &c.,	4 4	to	4 8
Best Short-horns,	4 2	to	4 6

Youatt says—" there are few cattle more prized in he market than the genuine Herefords." In respect o size, they rank next to the Short-horns. The wrier just referred to, observes:—" they fatten to a much greater weight than the Devons, and run from 50 to 70 score—[1,000 to 1,400 lbs.,] the four quarters. A toerable cow will average 35 to 50 score—[700 to 1,000 bs.] *** The hide is considerably thicker than that of he Devons, and the beasts are morehardy compared with he Devons, they are shorter in the leg, and also in the carcass; higher, and broader, and heavier in the chine; ounder and wider across the hips, and better covered with fat; the thigh fuller and more muscular, and he shoulders larger and coarser." The latter remark may be true as to the two breeds in general, but most of the Herefords we have seen, have not been coarse in he shoulder.

There have been comparatively but few importations of Herefords to America. The principal one, and that rom which the breed has been chiefly disseminated hrough the country, was that of Messrs. Corning & Otham, consisting of 5 bulls and 17 cows and heifers, mported in 1840. These were mostly from the herds of Mr. J. Hewer, and Mr. Walker. Mr. C. N. Bement purchased a bull and heifer in 1839. The bull died shortly after, and the cow and her increase were added to the first mentioned herd. Hon. H. Clay, of Kentucky, imported two bulls and two heifers of this breed in 1817. We do not know who was the breeder f this stock, or whether they were of the most eseemed families of Herefords. In an account of them, written by Mr. Clay, published in the *American Farmer*, 1822, he states that the price paid in England for he four, was £105 sterling. From this we should iner that they were not from a herd of the highest repute. He states that one of the bulls died on his journey from Baltimore to Kentucky. We have understood hat the increase from these animals was not large. In 1824, Admiral Coffin, of the Royal Navy, preented to the Massachusetts Society for Promoting Agriculture, a Hereford bull and heifer. They were bred by Sir J. G. Cotterel, whose stock was from Mr. Yarworth, and his from Mr. Benj. Tomkins, the first noted breeder of Herefords. The cow never bred. The bull was kept several years by the late Hon. Isaac C. Bates, of Northampton, Mass., and left a valuable progeny.

Besides the above importations, we are informed that Mordecai Hale, Esq., sent some Herefords to Steuben county, N. Y., many years ago. We have no pariculars in regard to their importation. [See remarks of Judge Leland, in *The Cultivator* for 1845, p. 109.]

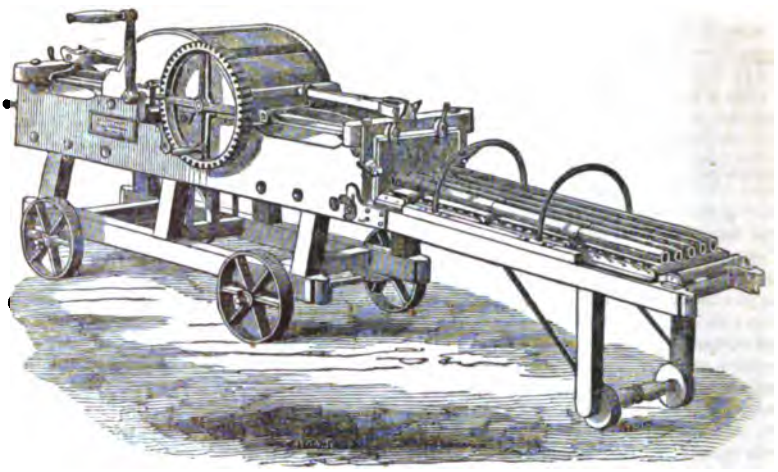
As to the success of the Herefords in this country, we believe they have given general satisfaction to hose who have given them a fair trial. They have good constitutions, thrive readily, and are more active han any other cattle of so large a size. But few of he full bloods have as yet been fattened or worked. The half bloods show a decided superiority over the ommon stock of the country, for these purposes. In espect to dairy properties, we think they have, as compared with other breeds, especially "Herd-Book" Short-horns, proved better here than some anticipated. From what we have seen, we think it would not be difficult to breed good dairy stock from Herefords; though t is probable, that the development of their dairy qualities, would be to some extent, a sacrifice of the disposition to fatten. We know that good dairy cows are met with in this breed. Their milk is generally rich, and like that of the Devons, yields a large proportion of the best of butter. In 1839, the Royal Agricultural Society offered a prize of fifteen sovereigns for the cow "best calculated for dairy purposes"—the competition being open to all breeds in the kingdom. This prize was taken by the Rev. J. R. Smythies, for a Hereford. The second prize was awarded for a Short-horn. Several other Herefords were entered for the prize—a circumstance which proves that cows were to be had of this breed, in the dairy qualities of which, their owners had such confidence, as to show them against any others. This was the only occasion on which the Royal Society has brought the different breeds into competition with each other—the class having been from the time abolished.

Mr. Smythies, in a late communication in the *Mark-Lane Express*, before referred to, says—" I have seen Hereford cows milk well, and had one myself which made eleven pounds of butter a week for three months." This may have been the cow on which he received the above mentioned prize, though this is not stated. But he observes that beef is much more profitable in his section than dairy products, and on this account "it is not an object with a Hereford breeder to have good milkers."

The milking property in cattle, undoubtedly depends on the object and *skill* of the breeder. The late John Price, in a communication published in the *Farmer's Magazine* for January, 1841, observes:—" Experience has taught me, that *no animals* possessing form and other requisites, giving them a *great disposition to fatten*, are calculated to give much milk; nor is it reasonable to suppose they should; it would be in direct opposition to the law of nature. Had I *willed* it twenty years ago, my belief is, that I could, by this time, have bred twenty cows, purely from my own herd, [Herefords,] which should have given a sufficient quantity of milk for (*paying*) dairy purposes; and I am equally confident that, in the same period, I could have bred a similar number, that would not at any time have given twenty quarts of milk per day *among them*. I feel confident that I could effect either of these objects much more easily and certainly than I could blend the two properties in the same animal,—retaining also the form and quality best adapted to live hard and feed—[fatten.]"

But it is not to be expected that the Herefords, or any other breed of cattle, will take the place of all other breeds in all situations. On this point, the observation of C. Hilliard, in his "*Practical Farming and Grazing*," is worthy of notice:—" There are four different breeds of cattle that are, for different soils, situations and purposes, superior to any other cattle in the world. The Durhams, (or as they are commonly called, the improved short-horns,) and the Herefords, for the best pastures; the North Devons for the short pasture on warm light soils; and the Scots for the wild and cold pasturage. These four breeds of cattle will ever remain pure, because it is thought that they cannot be permanently benefitted by crossing with any other breed."

Cements.—Soak isinglass in water till it is soft, then dissolve it in the smallest quantity of proof-spirits, with the aid of a gentle heat. In 2 ounces of this dissolve 10 grains of ammoniacum, and while still liquid, add a solution of half a drachm of mastich in three drachms of rectified spirits, stir them well together, and put the mixture into small bottles, which are to be kept covered. This cement, when used, is to be liquified by putting the bottle into hot water.



58—SCRAGG'S PATENT TILE MACHINE.

Drainage of Land.

The principal object of draining is to take away surplus water, but in effecting this, other important benefits are secured. It is obvious that a larger quantity of water in the soil than is required for the support of plants, is injurious. It is injurious in various ways. That wet lands are " cold and sour," is a common expression, and an acquaintance with the principles which this condition of the soil involves, shows that the popular idea is correct. It has been repeatedly proved that evaporation produces coldness,—that in the exhalation of moisture, heat is also carried off,—and this is one of the reasons why a wet soil is really a cold one. That such a soil is also sour, is proved by the fact that vegetable matters form acids, when decomposed in water. The sourness of peat may be taken as an example. Prof. JOHNSTON observes—" When [soils are] soaked in water, their vegetable matter either decomposes very slowly, or produces acid compounds, more or less injurious to the plant, and even exerts injurious chemical re-actions upon the earthy and saline constituents of the soil."

One of the first objects in the production of any plant, is to secure a temperature congenial to its habits. Every person may have observed that vegetation makes no progress till the weather becomes sufficiently warm. Different species of plants require different degrees of heat; but as a general rule, those which grow in the lowest temperature, are least valuable.

The effect of drainage has been found highly favorable in raising the temperature of soils. Experiments have been made which proved that, at seven inches below the surface, the average degree of heat for thirty-six successive days, on a soil which had been underdrained and pulverised, was ten degrees higher than on a soil precisely similar, that had not been drained and worked. [See experiments of Mr. Parkes, *Journal Royal Ag. Society* vol. v. pp. 141, 143.] The more rapid growth and perfect maturity of crops on drained lands, is doubtless attributable, in a considerable degree, to the higher temperature thus attained, and is an evidence of the great value of drainage in high latitudes, where, from the shortness of the season, the results of agricultural labors are peculiarly uncertain.

It may be safely assumed that draining is the basis of the great improvement which has taken place in British husbandry within the last fifty years. In America, the practice of draining systematically, can hardly be said to have been introduced. Various trials have, however, been made in different parts of the country; the subject is beginning to attract great attention, and we expect, shortly, to see the business carried on largely and profitably.

It has been objected that drainage is less necessary here than in Britain—that in our drier climate, crops are more liable to injury from drouth than moisture. To this it may be replied, that proper drainage, with a thorough working of the soil, is the best possible protection against drouth. A little observation will convince any person that those lands are most affected by drouth, which at some seasons of the year are too wet; of this class are stiff clays, and soils with a "hard pan " subsoil. Clays, which are not drained, keep the water so long on the surface, that the soil " runs together " and forms a mortar, which, when the water has evaporated, becomes like sun burnt bricks—unworkable, and totally unfit for the growth of plants. On the hard-pan soil, the surface is completely saturated with water in spring, or in wet weather, the compact subsoil not permitting it to soak into the earth. In both cases, the workable soil is usually thin, and as soon as a drouth comes on, the plants droop, and "because they have not much root, they wither away." Crops on such soils are very precarious; the only bed for their roots at any time, is the little portion moved by the plow, and it is but a small part of the time, comparatively, that even this is wholly available to them—it being almost always either too wet or too dry. The roots cannot, perhaps, penetrate the hard subsoil, or if they do, are liable to be brought in contact with substances more or less poisonous to vegetation. The effect of drainage in such cases, is to increase the depth of the soil, to render it more permeable to the roots of plants, and less liable to be affected by drouth.

The first action of the drain is to take away the water from that part of the soil with which it is in direct contact. A contraction of the soil soon follows, and cracks are formed, beginning at the drain, and extending laterally and vertically, which admit the percolation of water and conduct it into the drain. When the soil is thus brought into a state which allows the water readily to pass through it, the former difficulties of its running together and baking, are obviated; the soil remains open and friable, and plants are protected against extremes of wet and drouth.

It is a fact that plants suffer less from drouth on a friable soil, than on a compact one; as may be seen by a comparison of crops on clay and loam. This results from two causes. The roots of plants have more scope in a loose soil, and are thus enabled to draw support from a greater source. A mellow soil is also most moist, in time of drouth—pulverization favoring the ascent of moisture from below, as well as its absorption from the atmosphere. A heap of moulding sand will seldom dry but to a little depth, while hard clay in the same situation will become almost destitute of moisture.

Professor Norton, in his lecture on draining given at Hartford in 1847, states that during the extreme drouth which prevailed in Scotland in 1845, it was found that in all ordinary cases, the crops on drained land withstood the drouth much better than those on undrained, "because of the greater depth of soil available to the plant." And he adds that "it is now a proposition regarded among the best English and Scotch farmers as completely established, that drained land is not only better in wet seasons, but in dry seasons also." [Cultivator for Jan. 1848.]

The full benefit of *subsoil plowing*, on tenaceous soils, cannot be fully obtained without thorough draining. If the water is not drawn off, it soon packs the soil together again, after the plow has been used. Prof. Norton states, that where drains have been laid at proper distances in hard-pan soils, the air and rains soon break up the crust, the water filters through into the drain, and the ocheous deposit is gradually dissolved and carried away. Air and heat being thus admitted into the soil, the noxious compounds which had there formed are decomposed, and wholesome food for plants is produced.

In regard to the question—Where is it proper to make drains? it may be said that they are necessary wherever the character of the natural vegetation indicates water. Rushes, ferns, and what are generally called water grasses, always grow where there is too much water in the soil, at certain seasons of the year, for the growth of the more valuable plants. When the soil is properly drained, these aquatic plants can no longer live. There is scarcely a field on any common farm, that has not spots that would be benefited by the drain, even for grass, and still more for grain and vegetables. The farmer thinks, perhaps, that as the produce of grass is apparently large, nothing is wanting. But it must be recollected that the produce of wet land is of less weight and value in proportion to its bulk, than that of dry land. If the land is in pasture, animals will reject the herbage that grows on these damp spots, till forced by hunger to eat it. If the grass is made into hay, the same reluctance of animals to eat it is manifested, and their loss of flesh when kept on it, is evidence of its want of nutriment. Prof. Norton states that analyses of samples of grain from two fields, one drained and the other undrained, showed a decided inferiority in that from the undrained field. It is plain, therefore, that draining not only increases the quantity of produce, but also improves the quality.

Another great advantage of draining, is the prevention of grain and grass from being "winter-killed." This effect is caused by sudden freezing of the ground while the surface is wet. Land on which wheat and rye have been very uncertain from this cause, are found to produce the best crops after having been thoroughly underdrained.

But the advantages of draining in a *sanatory* view, are in many instances of the highest importance. It is well known that stagnant water is very prejudicial to health. In those sections of our country which are particularly subject to bilious fevers, and fever and ague, the soil usually abounds in vegetable matter, and during wet seasons is flooded with water, which frequently covers a large portion of the surface for several days or weeks, and finally goes off chiefly by evaporation. Sad experience has taught the inhabitants of those sections to regard such floodings as the precursors of sickness. Similar causes have produced like effects in Europe. An eminent physician, Dr. McNab, observes—"After twenty-six years' practice, I venture to add, that I have scarcely ever had a case of typhus fever in a malignant form, without discovering some stagnant drain, or over charged cesspool, or some other manifest cause of malaria, in the immediate residence of the patient." Another writer observes in reference to the situation of a neighborhood where fevers had prevailed—"Most of the houses surround an undrained common, full of pools of stagnant water, that in the winter season overflow. In the summer months, and greater part of the spring and autumn, they are stagnant, and undoubtedly, a fruitful source of malaria."

The benefits of drainage on the health of the inhabitants of wet and marshy districts, have been striking. An English report on this subject, says in reference to one district, where the inhabitants were formerly exposed to the malaria of marshy lands,—"for the last few years, *owing to the excellent plan of draining*, very few diseases have occurred that can be said to be produced by malaria. There is very little ague, scarcely any continued fever, and a case of typhus fever has not been known along the borders for the last three or four years. Some years back, a great portion of the parishes adjoining these marshes, was under water from the end of autumn to the early part of the following spring; then fevers and agues of all characters prevailed to a very great extent." Much testimony of a character like this, has been obtained in Britain, and leaves no doubt of the great benefits of drainage in regard to health.

Several diseases of domestic animals, such as "liver-complaint" in cattle, and "rot" in sheep, are known to be connected with the same causes which produce the diseases in man above mentioned. The effects of malaria and watery succulent herbage, in producing the rot, have long been known. As might be expected, the health of sheep and cattle has been benefitted by drainage to an equal or greater degree than that of the human race. C. W. Johnson states that the rural population of drained districts in England, have often remarked the favorable effects of drainage on the health and improvement of animals, by which losses of stock have been prevented to a great extent.

There is no insuperable obstacle to the drainage of those sections of this country which have heretofore been so subject to particular diseases. A gentleman of great experience in draining, states that drains will draw effectively, if properly made, where there is a descent of only four inches to the mile. There are few cases where a much greater fall cannot be had. How immense would be the benefits which would follow from the adoption of a thorough system of draining, in those sections!

Modes of forming drains.—Drains have been made in various ways. In clayey soils they have been formed by digging a trench to the required depth, and then placing a block of wood four inches square in the bottom, around which the soil is rammed hard—the timber being then drawn along, and the same operation repeated. The subsequent contraction of the clay, allows the water to enter the cavity thus formed. Such drains operate well for a time, but are not, probably, very lasting.

Stones have long been used for the construction of drains. They are made both with and without an eye, or open space, and if rightly constructed, are considered as efficient as any. It has been found that small stones are best for this purpose, and in England and and Scotland they are broken to about the size ordinarily used for McAdam roads, or so small that they will pass through a ring two and a-half inches in diameter.

Prof. Norton says—"The bottom of the [stone] drain should be about six inches across, and from six to eight inches in depth of these small stones should be thrown in. Turfs cut thin and very carefully so as exactly to fit, should be laid on the top, over-lapping each other, and the *earth rammed down* hard, as the object is to prevent entirely, the access of water from above; it should all filter in at the sides, for if it finds an entrance at the top, sand and small stones will wash down, and eventually choke the drain."

But the principal operations of draining in Britain, for the last few years, have been with tiles made of clay, and burnt after the manner of burning bricks. These could be used with more economy, especially in districts where stones were scarce, the expense of transporting the former, being much less. They have been made of various forms. The curved or "horse-shoe" shape was first adopted. The tiles were made in lengths of fourteen to sixteen inches, and three to four inches wide, with "soles" for the tiles to rest on when laid in the drain. The manner of making drains with these, has so frequently been described in our pages, that nothing further seems necessary in regard to them. Of late, another form, called "pipe" tile, has been introduced. We have never seen any of this kind; but in regard to the manner of making them, and their operation, we presume they cannot be better described than in the language of Prof. Norton, who during his residence in England and Scotland, made drainage a subject of particular investigation. We copy from his lecture on draining, before referred to in this article:

"It is a simple round pipe, made in lengths like the first and for the cross drains of not more than an inch and a half in the diameter of the bore. These can be made much cheaper than the other kind, as they are smaller, and all in one piece. They are not more than half the weight of the old fashioned tile and sole, and therefore an additional saving is effected on the transportation. The trench for their reception is also much smaller, being at the top just wide enough to allow the trencher to work, and cut at the bottom with a narrow tool, to exactly the proper size for the reception of the pipe. The pieces are simply laid end to end, and wedged with small stones when necessary. The water finds its way in at the joints. Many have expressed doubts as to the operation of these drains, thinking that water would scarcely penetrate into so small a channel, through such minute apertures. No difficulty has been experienced in any case. One gentleman, residing in the south of England, who has employed these small pipe tiles in draining exceedingly stiff clays, laying them at the depth of three feet, and ramming the clay hard down, offered a premium of £100 to any person who would keep the water out of them. These tiles, of both varieties, are made by machinery. The clay is worked in an ordinary pug mill, such as used in brick-making, care being taken that no stones are present; it is then forced through a die of a circular or horse-shoe shape, according to the kind of tile intended to be made. It passes through in a continuous stream, which is cut off into the proper lengths by hand, or by a little apparatus connected with the machine."

It affords us pleasure to state that Hon. JOHN DELAFIELD, of Oaklands Farm, near Geneva, has lately imported from England, one of the most approved machines for making tiles. It is *Scragg's* patent, and is represented by the cut at the head of this article. It has received two prizes of £20 each, from the Royal Agricultural Society, and the Highland Agricultural Society as the best tile machine exhibited at their shows. We have received from Mr. D. the following remarks in reference to the machine:—"It was made by Scragg, of Cheshire, England. It is of the largest size and embraces every improvement to the present time. This machine works the clay and screens it, so as to remove all stones and other substances—it is then carried forward by the machinery, and passed through dies of any required form or pattern, and delivered at the end of the table, ready for the kiln. The dies which accompany the machine, will produce drain pipes of 1, 1¼, 2, 2¼, 3, 5, and 6 inches bore. Horse-shoe tiles, rising 2½ and 4 inches, with soles to match the tiles—semi-cylinders of 8 and 11 inches in diameter. A pattern has also arrived for a new form of pipe, with a foot attached. This is a new feature, and, as it seems, an improvement. The machine is arranged also for making ridge tiles and pan tiles for roofing.

"As soon as the machine is put into work, I will send a specimen of each tile to the Agricultural Rooms. It is probable that it may be in operation by June, and then drain tiles will be furnished for not over ten dollars per 1000, and I hope in good time to see them delivered for a less cost. We cannot yet form an accurate calculation, but we are sure not to exceed $10 per 1000.

"I hope to cause the works to be erected close to the canal, that a ready delivery may be made to distant farmers.

"In procuring this machine, I have been much favored by the gentlemanly attentions of Mr. John Girdwood, of Chirk Castle, Scotland, who interested himself much and earnestly in the erection of this particular kind. I am also under obligations to Prof. Norton, who first brought this machine into notice in this country in one of his lectures, and through whom I received an introduction to Mr. Girdwood."

As to the *expense of drainage* in this country, no precise statements can at present be made. When machines for making tiles shall have been brought into full operation here, and all other branches of the business become fully understood and systematised, the cost will be reduced. But Mr. JOHNSTON, near Geneva, whose draining operations have been several times spoken of in our pages, states that at the cost which he has incurred, twenty-eight cents per rod, the investment is the most profitable he has made *on his farm*.

We are not prepared to lay down any definite rules as to the *distance apart* which drains should be laid. This must depend on the condition of the land. In many fields drains are only needed in particular *situations* or wet spots, other portions being sufficiently dry. Where the soil is uniformly wet, or is generally injured by water in the subsoil, the rule which is followed in Britain will probably be found best, and that, according to Prof. Norton, is to lay the drains at eighteen to twenty-four feet apart, which he says will drain the stiffest and wettest land.

The *depth* of drains, it is generally agreed, should not be less than two and a-half feet. They should be so deep that there is no danger of their being affected by any operations on the the soil, either in using the common plow or the subsoil plow. When the tiles are once laid, and the earth is properly fixed around them. they should never be disturbed, except to remedy some obstruction.

CULTURE OF GRAPES IN OHIO.—It is stated in the Report of the Agricultural society for the county of Hamilton, O., that not less than five hundred bushels of Catawba and Isabella grapes were sold in Cincinnati during last season, for "table use"—the price $3 to $4 per bushel. But the quantity sold for the table is said to have been inconsiderable, compared with the quantity used in the manufacture of wine. The grape culture is profitably carried on in the vicinity of Cincinnati, on the roughest hill-sides, which are of but little value for the ordinary purposes of agriculture.

Improved Implements.

System, Order, and Economy.

An evil of great magnitude seems to pervade and influence too many farmers, and that is the employment of an insufficient force to perform their *duty* at the proper season, and with economy of time. The oft repeated excuses for such neglect, and for the losses flowing from it, are, too much land in occupancy, or want of means, alias capital. Doubtless there are instances where such causes do operate harshly, but they are probably exceptions only, and by no means a general feature. As a general rule, the due cultivation of one hundred acres, requires a permanent steady application of the force or labor of one man, a lad, and one good team of horses. With less power, it cannot be maintained in good condition, or continue profitable. This proportion of force is indispensable for any larger quantity of land. The owner of a farm of one hundred acres, if an able workman, needs the addition of but one laborer if studying the closest economy; but a little reflection will convince us that two laborers will be more effective, and provide against the contingencies of sickness, or the casual calls from the farm to the neighboring markets, or occasional public duties, to which every man is called to contribute a portion of his time. Judging from the county best known to me, the great bulk of our state is divided into farms of about 150 acres, or less,—a size quite easy of control by a proprietor, with two laborers, rendering the excuse of too much land in occupancy, as untrue and invalid.

The next excuse, the want of capital, is equally unsound; for no man ever pays wages out of his capital or principal. Wages are ever derived from profits, and every farmer most naturally enlarges or diminishes the rate of wages, according to the increase or decrease of his profits. This is a law we all follow, though we do not all study it, or consider its bearings upon our profession, whether farmers, merchants, or manufacturers.

If profits cease, we cease to pursue the vocation, and turn our attention and means to objects of greater demand among our fellow men.

But at no time in the history of man, did the cultivation of the earth, properly pursued, ever cease to afford abundant profit to the capital employed, and sufficient wages to all engaged in it. I am aware that this position will be denied by men engaged in other pursuits, and am willing to admit that some portions of the earth do not exhibit the feature above claimed; but the cause for such an exception, is an artificial interference with the farmer, forcing him from his natural position to meet the exigencies or desires of some other class of his fellow beings. Happily with us, the position I claim for the American farmer is well sustained, and needs no other proof, than the existing prosperity of the whole breadth of our land,—its uniform, steady, onward increase from year to year, since the dawn of our freedom.

I have been led to these remarks, because the above excuses are offered as cause to adhere to the plow, the harrow, the scythe, and the flail, as the only absolutely necessary implements for the farm.

Has it not been proved already, that the work accomplished in former days, is now performed by other implements, or improvements on old ones, with much *less labor* and in much *less time?* Is not our work generally *better* done at this day, by all who use these improved implements? Surely it is so, as has been proved by the economy with which wheat can be raised, and as we hope further to prove, in the raising of Indian corn.

Let us now proceed with the examination of other farm implements and machinery, testing their economy.

There is music in the sound of the flail, but its notes are seldom heard since the introduction of the *Threshing Machine*. It is more than one hundred years ago, (1732) that the first machine for threshing grain was patented, by a worthy Scotch farmer. All however, that was claimed for it was, that by its use, one man would do the usual work of six men. In 1755 another and better machine was produced in Scotland. In 1772 the English began to feel the necessity to save labor and time, and a machine was produced by Mr. Smart; and in 1785, a London mechanic brought forward an improvement which was more successful than its predecessors, though far from perfect; others followed rapidly until the year 1790—93, when an American farmer, Mr. Ampthill, *of Virginia*, invented a machine for threshing grain by moveable rods, and this machine was introduced favorably into England.

Prior to 1790, an ingenious Scotch mechanic had conceived the plan of passing the grain between rollers, which probably led to the improved machine now so extensively used in this country; nevertheless, it was left for American ingenuity to supply the English farmer with the more perfect machine, for it is the American design now mostly used, as patented by Jas. Atkinson, of Braham Hall, in Yorkshire. It is the application of spikes on the revolving drum, that is peculiarly American. The use of the threshing machine in this State, does not, I believe, extend beyond the year 1822, or thereabouts, when a very imperfect one was put up in Saratoga county, brought from New Hampshire. Not operating with the desired success of the proprietor, it was transferred to Mr. T. D. Burrall, a farmer at Geneva, in Ontario county. He being a skillful and scientific mechanic, as well as farmer, very soon improved upon its mechanism, and in 1830, gave to us the machine which can thresh for us 300 bushels per day or more. A more conclusive proof of excellence need not be required than the fact that, since 1830, full four thousand of *these* Threshing Machines, have been put into operation in the United States. They are made of various sizes; the most convenient for the farmer, being capable of threshing about 200 bushels per day, with the power of four horses.

Having for several years used one of those threshing machines, I compute the cost of threshing and cleaning my wheat, (both operations being performed by the same force or power,) as follows:

One man	to feed the machine, at	39	*cts.*	per day
do	to supply the feeder,..	38	"	"
do	to pitch from the mow,	34½	"	"
do	to deliver the straw,..	32	"	"
do	to attend the fanning mill, generally done by self,	50	"	"
	Per day,.....	$1 93½	for labor.	
	Four horses and a driver,....	2 50		
		$4 43½	pr day.	

Wheat is threshed at an easy pace, delivering 200 bushels (often more) per day, which at the above rates, makes the cost per bushel to be two cents, 21.1000.

It should be remarked that the rates of wages above named are the actual rates paid; the work being done by yearly hands, whose wages amount per day to the sums stated.

Itinerant threshing machines, can generally be hired to thresh for farmers who do not possess these implements. The charge for threshing in such cases, is from four to five cents per bushel, and the supply by the farmer, of all necessary horses except two, and all the necessary labor except the owner, who commonly feeds his own machine. These machines are generally used on the field, the wheat sheaves are brought from the shocks, and the straw is left in numberless instances occupying the same resting place season after season.

The economy of the threshing machine is readily understood, when we compare the cost per bushel as above stated, with the cost per bushel when threshed by the flail, and cleaned through the fanning mill. There are incidental benefits, also, of much value, such as prompt separation for market before winter sets in,—saving in weight—no destruction by rats and vermin,—no loss of interest;—it gives abundant time to house or stack the straw for our stock.

In all estimates for work done by our machines, we ought to charge about 10 per cent. on the cost of the machinery, for its wear and tear annually; and in this case, we must distribute this charge rateably between the crops of wheat, barley, rye and oats, or whatever crops are subjected to its operation.

Thus far, it is hoped that farming, when conducted under a system where the labor is performed by well-constructed machines, or implements, is proved to be economical, and necessarily more profitable. After the consideration of a few more important implements, I propose to enter upon the easy task of censuring the *want of system;* but in such a manner, I hope, as to create a desire for order and method. AGRICOLA. *Seneca Co., May,* 1849.

The Season.

The Winter and the April snow storm.

EDS. CULTIVATOR—The early part of November, 1848, will long be remembered and often quoted by the oldest inhabitant for the severity of its frosts. In many places the mercury fell to 2° and 3° below zero, and the ground froze as solid as though midwinter had driven the mellowness of autumn into a hopeless grave. Dark clouds floated over the atmosphere, and frequent snow squalls fully indicated that the power of the northern storm-king was in no way relaxed through the kind influences of summer. About the middle of the month the earth was whitened with its wintry vestment, and though the cold was less severe, the snow remained upon the ground for several days. The evening of the 17th is memorable for the luminous and beauiful Aurora Borealis which continued to increase in interest until ten o'clock. The streamers were of unusual brilliancy, and followed each other in such rapid succession that they gave a life-like appearance to the whole northern horizon. But what was most interesting in this night's phenomena was the "*Corona,*" or union of beams at a common centre, but entirely separate from the long streamers of the north. Although light clouds were floating in the atmosphere and the night was moonless, the degree of light was much greater than that of the full harvest moon. Indeed, the power of light was so great that a person might have seen to pick up a pin or a needle in the streets without difficulty. The greatest degree of light occurred about half past nine o'clock.

Whether these lights have any influence on the future state of the atmosphere, or are in any way concerned in the production of storms, is a point of some importance in the economy of meteorological operations, and we rejoice that men of leisure and science in different parts of our country have the matter in investigation. It will be admitted by all any way observant, we believe, that atmospheric changes, and often very great ones, follow the appearance of these beautiful corruscations. When seen in autumn, the season when they are most commonly visible, they have become the proverbial heralds of cold. Cool weather followed their appearance in this instance, though of a more severe nature than that which preceded them.

Early in December the bands of this premature winter gave way, the frost broke up, the ground settled, and everything savored too much of spring. The amount of freezing in the month was very limited, and many farmers plowed as convenience dictated, until the 20th of the month. Sheep refused hay until that time, and neat cattle preferred rambling abroad to the confinement of the yard. The sun shone in mildness, and vegetation in many instances, started into new life. On the night of the 22d, snow fell on the unfrozen earth to the depth of six inches, and an increasing coolness of atmosphere was the consequence. The night of the 23d, was the coldest thus far experienced in the season, with fresh wind from the northwest; 24th, wind changes to southwest, and blew a searching chilling gale; 25, warm and thawy in the morning, with a heavy driving rain in the afternoon, which spoiled the sleighing. At evening, wind changed to the northwest and blew a heavy gale for 24 hours; 27th, snow commenced falling at noon from north, and continued until it fell four inches; 29th, snow again to the depth of 5 inches from the south, which again makes the sleighing fine.

January 1, cool with a light breeze from the N. W.: 2, tremendous blow which piled the snow in mountains along the fences and in the highways, after which it continues cold for several days. A thaw came on the 22d, which spoiled the sleighing in places where the snow lay as it fell, or was partially blown off; 24th, the weather grows cold again.

February was a month of unparalleled severity. But few mornings in that month, was the mercury standing above zero, while in many instances, it sunk to 10° and 12°, and in one or two to 20°. It was a month of uniform pinching cold, attended with but *few* storms, but of uniform good sleighing.

March was of a lamb-like character through its duration, cool but not blustering. South winds and fogs dissolved the snow rapidly about the 20th, and by the close of the month, the ground was nearly naked even where the deepest drifts had accumulated in the storms of winter. A light snow of some three or *four* inches in depth, fell towards the close of the month, but with the mud beneath and the sunshine above, it was soon dissolved.

April came in with mildness, and the sunshine and dry winds argued that the reign of mud would soon be past. The 5th was a warm, smoky, spring-like day, and the merry birds sang sweetly in its sunshine. On the 6th, it changed to cooler; 10th, mild and agreeable, plowing commenced on warm dry lands; 12th, cold with dark clouds flitting from northwest; 14th, colder weather comes on, dark heavy clouds overspread the horizon, giving frequent squalls of snow, attended by a high northwest wind; so intense is the cold that the ground begins to freeze at 2 o'clock, P. M.; at night, freezes hard, so that the rumbling of a wagon is loud and heavy. 15th, wind continues high through the day, with lighter clouds, which give frequent squalls; the ground did not thaw at all that day, and small streams were frozen over. 16th, a dark murky day, with very frequent squalls, wind high from northwest; 17th, clear with a keen air, and the sun shining faintly, as if obscured by snow; 18, stiff breeze from the southeast, frost nearly out of the ground at noon; clouds heavy; at 4 o'clock, P. M., commences raining, with the wind high; at ten minutes past 5 o'clock, wind changes to northeast, and snow commences falling moderately; continues to snow through the evening, but melts as fast as it falls; at nine o'clock on the morning of the 19th, snow measures eight inches deep on a level, and continues to fall rapid, until eleven, after which the fall in a measure subsides; at 3 P. M., done snowing, though the wind continues northeast, mild, snow wasting.

It may be fairly estimated that in this storm, more han half the snow melted as it fell, and that, had t all been on the ground at once, the depth could not ave been less than 18 inches, which would probably make it the heaviest snow of the season. Although he trees were heavily borne down with their burthens, t is fortunate that vegetation was in no instance sufficiently advanced to be injured by its effects. It is, on he 20th, rapidly wasting, though checked in its departure by a cool northwest breeze, clouds, and the prosect of a frosty night to prolong its unwelcome visit tomorrow.

Although the past winter as has been shown, has exibited a December of a mildness suited to a more outhern latitude, and a February of almost polar seveity, and many fears were awakened that sad effects would result from the two extremes, especially to our ruits, the early indications of spring revived the hope that no anticipated evils of this nature would be realised. Previous to the late storm and cold, the buds of the peach and plum appeared to possess a uniform appearance of healthful vitality. Grass and winter grain also, before being pinched by the cold dry winds, looked fair and promising.

In a season of so mixed a temperature, the farmer will naturally fear for the safety and healthfulness of his domestic animals, but all kinds of stock, unless it be in a few instances where they commenced the winer in leanness, or have failed of receiving the kind atention which is their due from those who should be happy in administering to their comfort, come out in healthful thriftiness, an ample compensation for all the abor which has been bestowed in their behalf. **Wm. Bacon.** *Richmond, Mass., April* 21, 1849.

The Veterinary Department.

Docking and Castrating Lambs.

Eds. Cultivator—As the time is at hand to attend to docking and castrating lambs, I will give you my method of performing that operation.

When the lambs are from one to two weeks old, and the weather is good, I drive up my ewes and lambs to the barn-yard, in the afternoon, towards sunset; put them in a close yard, take out all the lambs. Put the lambs in a small pen, or on the barn floor; then let the ewes out in the barn-yard, which should be well littered with straw. Have a boy to catch the lambs; hand them to another hand, who lets them stand on their feet. I take the tail in my left hand, hold it out straight, have a good shoe knife, and cut off the tail as close as suits fancy. I find this method quicker and better than a chisel and block. Then mark the ear and let the lamb go, keeping them in the yard over night.

In the course of a week or two, bring up the ewes and lambs again. Put them in a close pen; select out the lambs; let the ewe lambs go; put the ram lambs in a pen or on a barn floor. After the lambs are all taken out, let the ewes into the yard. Remember to have it well covered with dry straw. Have a boy to catch the ram lambs, place a good hand on a low bench, who should take the lamb on his lap; hold him by his fore and hind legs. The operator will soon find in what position the lamb should be held. I take my knife, cut off about half the pouch, pull out the testicle, and set down the lamb. The mother comes up to meet him; he soon lays down, consequently soon stops bleeding. The next morning I let them out. The lamb will go off as smart as if nothing had occured. There is more danger from docking than altering. To perform both operations at the same time is too severe.

I will give my reason for choosing the evening instead of the morning, which is the usual time for altering. If you perform the operation in the morning, the ewes are hungry, and ramble about for food, the poor lamb will drag along in pain, and continue bleeding, from the exercise. Reverse the time, and the ewes and lambs lie down and continue quiet all night, and the bleeding soon stops. **O. F. M.** *Wheeler, Steuben Co., N. Y., April*, 1849.

Cattle that have eaten Apples.

Eds. Cultivator—I had a lot of cows break into an orchard, and soon after they had eaten all the apples they wanted, they were discovered, and salt was given them, of which they partook freely. Not one was injured. Afterwards I had a lot of steers break in and gorge themselves with apples in the same way as the cows had done, and I gave them salt with the like results. The effect of the salt was, I presume, to retard fermentation, and operate on the bowels as a cathartic. Whether it would always have the same effect, I cannot say, but it is worth a trial. **Abraham Wanzer.** *Sherman, Fairfield County, Conn.*, 1849.

Cure for Foul in the Foot.

Having a cow that had been troubled with this disease for a long time, and after applying numerous remedies without any apparent success,—the foot becoming very putrid, I applied for three successive days, a strong solution of copperas once in each day—after which I applied for a few days, strong pork brine, and a complete cure was effected. **F. E. Stow.** *Braceville, O., Feb.* 26, 1849.

Cure of Heaves in Horses.

Eds. Cultivator—Pick or gather the buds or sprouts of the white pine, in the spring, say in May, in most parts of the United States. They should be gathered when young and tender, being from four to eight inches long. They can be cured or dried, and are then in readiness at all times. I used from two to three quarts of the buds when green, to about three gallons of water, and let them simmer or boil until I thought their strength was mostly in the liquid. When cool, I gave the horse nearly a quart daily, for ten days, which proved a perfect cure.

The horse was unable to work before administering the above, and at present there is not a better horse in the land for business. The cure was effected in June, 1845.

I further recommend to all persons troubled with pain in the chest or side, to use the above liquid, sweetened with loaf sugar. I have had more benefit from this medicine for pain in the side and breast, than anything I have ever used. **John D. Spencer.** *Herkimer, N. Y.*

Bone Meal for Cows.

It may have been frequently noticed that cows, while giving milk, evince a disposition to eat bones. The appetite is sometimes very strong for them; indeed so voracious are some cows that they will leave all other food for the sake of obtaining bones, which they will chew by the hour together. This apparently morbid propensity is accounted for by the following theory:—Chemical analysis proves that milk contains bone; and it is hence inferred that the food of the cow should contain the elements of bone, in order to produce milk of proper quality, or that which is capable of affording due support to all parts of the system. If the food is destitute of any of the essential principles of milk, the effort of nature to perfect this fluid, may occasion a drawback on some of the bodily tissues, and the substance of the bones and muscles may be carried off in the milk. The bones from this cause become weakened, and are unable to support the body. This effect is sometimes called the "bone disease." Prof. JOHNSTON, several years since, suggested that *bone meal* fed to cows, would be found useful in such cases. A late number of the *Massachusetts Plowman* states that a number of farmers have tried this, and report that they have found it an effectual remedy.

Land which has been long pastured by milch cows, has been found to become so much exhausted of phosphate of lime—the earthy matter of bones—that the milk was deficient in this principle, and the cows became weak in their frames, and unhealthy. On manuring the land with bones and with phosphate of lime, the composition of the herbage again became perfect, and the cows were strong, and gave good and nourishing milk.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

The American Fruit Culturist.

This new work, having been delayed beyond the time announced for its appearance, it seems necessary to state, that the late severe illness of the author when it was nearly completed having arrested its progress thro' the press, it is now concluded, in order to make it as correct and complete as possible, to defer its publication till near the commencement of another fruit season, or on the first of August.

Fruits in Ohio and adverse Soils.

The Third Annual Report of the Ohio Board of Agriculture, an octavo pamphlet of 220 pages, for which we are indebted to the kindness of M. B. BATEHAM, mostly occupied with valuable agricultural matter, contains some very interesting reports on the cultivation of fruit in Ohio.

The unusually diversified soil of the state, so far as it affects the success of different varieties of fruit in different localities, is thus spoken of by C. Springer, of Muskingum county:—

"The geological arrangements of the state, especially from the eastern to the middle and southern borders, are such as to have a great influence upon this subject. The various strata lie dipping in a direction a little south of east, and of course are perpetually cropping out, bringing to the surface new formations and combinations of clay and minerals, all of which according to their character, very seriously affect the welfare of fruits. And hence it is, no doubt, that the same kinds of fruits which will prosper well in one place, fail to do so directly west or east in similar apparent situations. Indeed, the whole system of special manuring proceeds upon the supposition that certain principles, or qualities of soil, are essential to the success of fruits, varying according to the nature of the kinds."

"If you were to take your stand upon one of the elevated hills, of Muskingum county, for instance, you could at one glance, look down upon earths, that would have a greater influence on the apple, peach, or cherry, for good or for ill, than would the whole range of climate, from the shores of Lake Erie, to the foot of the Allegany mountains. The heart cherry upon these low, white-oak clay lands, winter-kills almost without exception. Upon the high, black-oak ridges, where there is a greater mixture of sand with the soil, they prosper and bear abundantly. The peach and the quince, on this clay land, are very prone to winter-kill and bear little; on the high grounds above, they do well." "The heart cherries seem to want a sandy soil, and if they can be accommodated with this, it is no difference whether they be situated high or low. The limestone clay, however, is not so fatal to them as the white-oak. On lands where you find the chestnut, black-oak, or poplar timber predominate among the forest trees, this cherry will be very likely to prosper."

Most varieties of the apple, it is stated, thrive finely on those lands so unfitted for the cherry; the following fact, however, shows the different nature of varieties of the same species, and the different soil they need:—

"The Roxbury Russet on the clay flats does no good —the tree is unhealthy, bears poorly, and the fruit is knotty and defective; on the elevated sandy ridges the tree prospers and bears heavy crops of perfect fruit. The Newtown pippin is unsuited to the sandy ridge; the fruit is frequently small, scabby and cracked; but on the clay flats, where the Russet fails, it produces abundant crops of the finest fruits."

The same paper states that the Rambo, and the Westfield Seeknofurther, have been found to be well adapted to all soils in Ohio, and prove excellent fruits.

The writer, in his prejudice against the American Congress of Fruit Growers,—the most intelligent body of the kind, ever assembled in the United States,—has fallen into the mistake of asserting that its fruit committee all resided east of the Delaware river.

Dr. S. P. Hildreth of Marietta, in the same volume, says:—"Roxbury or Putnam Russet—our main apple for winter, and for sale on the Mississippi river—some of our river farms produced from 1000 to 1500 barrels, besides other varieties—it keeps till April." This is about as far south as Baltimore. Dr. Hildreth mentions the Tallman Sweeting, "as a valuable *large green* winter apple." The genuine Tallman Sweeting in the State of New-York, is quite light yellow, frequently while yet hanging on the tree. He thus speaks of the Rhode Island Greening, the unfitness of which for Ohio, has been so largely discussed:—"It is a fine apple for cooking or eating; the fruit of old trees ripens too early, but young ones do better; the '*bitter rot*,' so common to this and many other old kinds, in *old* orchards, is caused by the exhaustion of the potash and lime in the soil, and may be remedied by renovating the soil at the roots."

Heating Green-houses, &c.

This subject, which is attracting so much attention in England, is not less important in our variable climate.

Theoretically considered, there can be no doubt of the great superiority of "heated air" for this purpose, combining as it does, the essentials of warmth and ventilation.

Practically, every attempt to introduce this, seems, so far as we are informed, to have proved a failure in this country; although, abroad, the "Polmaise" method, by which a due proportion of moisture is secured appears to find favor.

To ensure success in this mode of warming, two things appear essential. The first is, that a current of air is established through the room to be warmed. Unless this is done, inequality of temperature, and stagnant vapor, will soon destroy the plants. The current can easily be secured by a large pipe, connecting the bottom of the air chamber, with an aperture in the floor at the opposite end of the room. The second requisite is, that the air shall be supplied with its due proportion of moisture. This may be done in part, by constructing a small air chamber, and by providing for the admission into the air chamber, and into the room to be warmed, a *very* large volume of air. The temperature will therefore be low, and its capacity for moisture be little increased. If a greater degree of dampness should be desired, it will be furnished by drippings from a tank, placed over the warm air pipe.

It is much to be hoped that some ingenious mechanic should construct a furnace, which, with the principle of the airtight stove, should combine cheapness, efficiency, and economy in fuel. The demand for such an article is unmistakeable. W. R. S.

Renovating Pear Trees.

What is the best remedy for a pear tree that formerly perfected its fruit beautifully, but which for three years has cracked—is gnarly, hard, small, and imperfect in every respect? Tree thrifty, and to all appearance healthy. Is the flowering locust likely to sour the ground, by its roots or shade, so as to injure the pear tree—standing within twenty feet? The variety came to us as the *Bachelor*—not described in books—fruit much like the Bartlett, in shape and flavor, but a little smaller. A. J. Keeney. *Erie, Mich., Feb.* 1849.

Frequent similar cases have occured, where the pear tree has grown thriftily, but the fruit has been worthless. It appears to be caused either by a natural deficiency or disproportion of some ingredient in the soil, or by the exhaustion of certain portions existing perhaps scantily at first. The fruit and the wood, differing in delicacy or susceptibility, as well as in composition, is the reason why the tree will often grow well, while the fruit fails.

Such trees have been renovated and made to yield good crops of fair fruit, by digging, at a few feet distance from the tree, a circular trench, say a foot and a half deep and three or four feet wide, and filling the space thus made, with rich *fresh* soil and turf, intermingled with a bushel or so of blacksmith's cinders, a few bushels of ashes, and two or three pecks of ground or crushed bones. This should be done in autumn or spring, the former being rather the best. An admixture of a bushel or two of charcoal with these ingredients, has been adopted in some successful instances, but it is probably of no essential advantage.

The Osage Orange as a Hedge Plant.

The past winter was one of unusual severity in western New-York. Many *hardy* roses lost half the growth of the previous summer. Plants of the Osage Orange of five or six years, were but little injured. Young plants suffered more. Upon a dry subsoil, and a somewhat elevated situation, there can hardly be a doubt of the superior efficiency and permanency of this hedge, wherever the climate will allow. W. R. S.

Mildew on Gooseberries.

In answer to frequent inquiries on this subject, we copy the following furnished by a correspondent to a late number of *The Horticulturist*:—

"Early in the spring of 1844, I purchased at auction a dozen bushes of the best English varieties of gooseberry, stated to have been imported by Kenrick. These were set out in good rich soil. I also transplanted to the same situation several larger bushes, of a small red variety, received from a friend a year or two before. In common with cultivators of this fruit in my neighborhood, I was year after year, doomed to disappointment in the fruit produced. Although, from the bushes of the smaller variety, last named, I annually raised a few very fair and fine flavored berries, the former yielding not an eatable fruit,—being, when about half grown, so covered with *mildew*, as is frequently the case in this climate, that a red variety could not be told from a white or green one.

Partly from the information obtained from *The Horticulturist* and other sources, and partly from my own reflection, I was led to try early and close pruning, and the application of a mixture of unleached wood ashes and salt, to the surface under the bushes. Thus: about the 1st of March, and before the buds have much swollen, cut off the larger half, and in some cases, two-thirds of the new growth, and when too thick, thin out some of the branches, so as to give them handsome open heads. When the frost is fairly out, and the ground cleared off about the bushes, apply to each one quart of unleached wood ashes, and one table spoonful of coarse salt, well mixed; spread evenly on the ground under each bush, over a space of one foot or more in diameter, according to the size of the bushes. About midsummer, add half the quantity for renewal.

I claim nothing original in my experiment, but know that it has succeeded admirably the two last seasons,—affording me an abundance of fine fruit, entirely free from mildew, on all the bushes, which are of seven different varieties. My method of cultivation may not succeed in all situations and seasons; but if lovers of the gooseberry will try it, before discarding and throwing away their bushes, as some of my neighbors have done, I think they will be fully remunerated for their pains."

Planting Fruit Trees.

"Will it answer to plant trees in grass ground?"

This question which has been answered for the thousandth time, is still propounded frequently; and with an interest which implies, that a great saving of labor may be effected, and full returns for the expenditure received, though the planting be indifferently performed, and the subsequent care neglected. If the ground has been deeply plowed, the "putting out" is soon accomplished, and if all is properly performed, the growth and value will be increased ten fold. A neighbor set out some apple trees in turf; soil deep and rich. At a few rods distant, he planted others, which were kept under cultivation. In his own language, "The last were as big as his leg, the first but little larger than when taken from the nursery." An extensive fruit dealer once called my attention to the difference between that part of his peach orchard which had been plowed, and that in which it had been omitted for the present year only. The deep green leaves and vigorous growth of the cultivated part, contrasted strongly with the other, altho' to the casual observer, both would appear in good condition. W. R. S.

Hyacinths, &c.

The following is an extract from a late letter of a distinguished florist of this State, in relation to this beautiful bulbous flowering plant:—

"There is a great difference among Hyacinths. The size of the raceme is a most important part. If the flowers are few, and scattered along the scape, the plant is generally of small value; but numerous and crowded flowers make the best appearance. I have some of extraordinary beauty. The bulb importers say that Hyacinths soon degenerate in this country; and it may be so where they are neglected; *but a few years ago, I bought a number at Philadelphia and New-York, that are quite as fine as when I first got them*; *and I have had several for many years that show no signs of degeneracy*. Dr. T—— called the other day, and admired them very much. He lost most of his splendid kinds last summer by the rotting of the bulbs. They ought to have been taken up. Some kinds of bulbs, as the Crown Imperial, and some species of Narcissus, are very liable to rot in summer, unless the soil is trodden down over them to keep out the wet." These remarks were applied to heavy soils, and are doubtless applicable to all on which the water does not immediately drain off.

"The seeds of *Cyclamen hederæfolium* have germinated, and the young plants along side the old ones ap pear very much *at home*. It is curious that such interesting ornaments of the border, should have been so totally neglected in this country."

Budding Peach Trees.

Eds. Cultivator—In reference to the destruction of the inoculated Peach buds, by the cold weather during winter, complained of by C. J. S., I will give the result of my observations and experience. I have devoted considerable time and attention to the propagation of choice varieties of fruit for some years past, and have endeavored to trace causes to effects as far as my limited knowledge would permit. I have budded annually for seven or eight years past, many of all the different varieties of fruit from the apple to the orange. I have sustained some losses from the cultivation of the peach, as complained of by your correspondent. I have found if they are not budded till September, they are liable to perish in winter; as the adhesion of the bud and tender wood of the stock where the bud is inserted, is not sufficiently matured to withstand the severity of the weather. I commence budding the peach as soon as the buds are sufficiently formed and matured, so that the leaf buds can be discerned from the fruit buds, which is in the fore part of the month of August. I think if C. S. will adhere to the above rule, he will not have to resort to the *labor-losing* experiment of grafting the peach. R. H. Drake. *Bloomingsburgh, Sullivan Co., N. Y., April*, 1849.

Rose Bugs.

This insect, so troublesome in many parts of the country, can only be avoided by direct destruction. An excellent practice is to shake the trees at night over sheets of muslin spread beneath, which enables the operator to kill them with facility. Killing by hand-picking has been successfully practiced, but requires time.

Hybrid Perpetual Roses.

One of the most valuable characteristics of this class of roses, is its blooming out of the usual rose season, when the brilliant profusion of flowers on the Hybrid China and other early summer kinds has disappeared. Now, to have the Perpetuals to perfection in late summer and autumn, pinch out, as soon as visible, every blossom-bud that appears at the first crop, or during the first few weeks of their appearance. This reserves the strength of the plant for a later period, and as a consequence, thick and rich clusters are obtained, not to be had in any other way.

Lima Beans.

Eds. Cultivator—Those who are fond of this vegetable luxury, may be sure of raising them without risk of failure by adopting the following plan. Procure a board two feet square, and nail strips around the edge, three inches wide about the middle of May, cut some sods from the roadside where the grass is short, divide them into squares of four inches each, soften or mellow the soil in each square, without destroying the texture of the sward, place four beans on each, and cover with another sod of the same size; moisten sufficiently, and place the board in the warmest situation that can be found, either beneath the surface of a heap of manure that is heating, or in the top of a room where a warm fire is kept during the day. Keep them in this warm situation until the beans themselves begin to rise; then remove the upper sods, and cover with leaf mould one inch deep. As soon as the beans show themselves through this, they should be removed to the hills where they are to grow, which is done by carefully lifting the sods from the board, and placing them in the ground. I prepare the hills by spading in, and mixing thoroughly with the soil, about half a wheelbarrow load of well-rotted manure; if it is two years old the better. I also add a few quarts of leached ashes to each hill with the manure. At the time the beans are placed in the hills, the poles should also be set for the support of the vines—two strong ones to each hill. By adopting this plan, the beans will be fit for the table at least two weeks earlier than they usually are when raised in the ordinary way. It will be seen that each board will hold twenty-four hills, and twice that number will be enough for the use of any ordinary family. Isaac Hildreth. *Big Stream Point, April*, 1849.

Fruit-Buds killed by Frost.

Eds. Cultivator—Why are not fruit buds killed on the montain, as well as on the flat?

In answer to the above query of your correspondent, R. H. Drake, in your April number, I conceive you have not given the true cause.

My opinion is, that fruit buds are not killed by cold weather, unless there has previously been warm weather sufficient to cause them to swell, which would much sooner occur in the valley or on the plain, than on the mountain, where the colder air will keep them back; and after the buds have commenced growing or expanding, a degree of cold less severe, than that experienced either on mountain or plain, will destroy them.

The same fatal results have occurred much farther south than the location named, and where the cold has not been as intense as on the mountains there.

The warm weather during the month of December last caused the fruit buds, in warm situations, to germinate, hence their destruction by the succeeding cold. P. S. *Burlington Co., N. J., April*, 1849.

Spanish Radishes as Food for Cows.

Eds. Cultivator—Mr. Aaron Belangee, a respectable farmer of Bordentown, N. J., whose farm is in a high state of cultivation, raised on one-fourth of an acre of land, one hundred and nine bushels of the white Spanish Radish. He states that they were sown in drills, in the same manner and at the same time that Ruta Bagas are—that some of them grew five inches in diameter. He prefers the white variety *to the black* on account of their growing to a larger size. He says that the person from whom he obtained the seed, informed him, that after feeding his cows for some time with Sugar Beets, he commenced giving them the Radishes, and in about a week his wife inquired what he had fed the cows with, as their milk had, for about a week, produced one-third more cream than it had before.

Mr. B. experienced a like result in feeding with Radishes. B. *Burlington Co., N. J April*, 1849.

Large Produce of Honey.—Mr. James Culver, of Royalton, N. Y., informs us that his father had two swarms of bees come out on the 15th of June, 1848, both of which were put into one of Colton's hives; and they made during the season, one hundred pounds of " box honey," besides filling the body of the hive with honey and comb. The hive was one of sixty which were kept together.

Drilling Wheat.—The *Michigan Farmer* states that Col. Curtenius, of Grand Prairie, has satisfied himself from experiments which have been made in his neighborhood, that wheat sown with a drill, will yield on the average, five bushels more to the acre than that sown broadcast. It is more secure against being winter-killed, and the seed is more sure to vegetate.

Domestic Economy, Recipes, &c.

Manufacture of Cheese.

(*Continued from page* 154.)

In raising heat to scald the curd, it is not proper at all times to raise it to a given point with the same rapidity, because, sometimes when the curd appears ready to scald, a rapid increase of heat will soften instead of hardening it, owing to the rennet not having time to perform its office properly. At other times it may be necessary to raise heat speedily, in scalding, to keep pace with the effect of rennet, which is accelerated by the milk being nearly sour. The slower rennet acts upon curd the longer time is required to raise and hold a scalding heat, never exceeding one hundred degrees, Fahrenheit, except to suppress a speedy action of rennet with sour milk; then, an excess above blood heat will retard its operation and keep pace with its effect. The cheese-maker should bear in mind, that heat and rennet are the principal agents used, and success depends much upon their action being properly combined throughout.

"Are any other than calves' rennets used, and what is the best method of preserving and preparing them for use?"

Swines' rennets were formerly used, mixed with those of calves, to make a cheese soft and tender, and those of sheep and beeves were used to harden curd and keep cheese in a pressed shape; but I know of no dairyman that now uses them.

Whatever plan is adopted to preserve rennets for future use, care should be taken that the decomposing properties of the stomach do not continue to act, and the strength evaporate. When salted and dried the rennets should be kept in a dry atmosphere, or the salt in them will attract moisture, and soon destroy their best properties. It is argued by many experienced dairymen, that the stomach, with all its contents pickled together in salt, will make more cheese, and of as good flavor, as when dried without the curd. But I would ask, if meat were salted with all the blood and animal fluids in it, would it be as good flavored at the end of a year, as if well dressed and salted? And would not a quantity of food, half digested, salted with the stomach, materially effect its flavor, if kept a long time? Beef and pork are sold in market, after being in salt one or more years, at a reduced price, as "old meat," having lost its best flavor.

The flavor of cheese depends much upon the flavor of the rennet used. Therefore, I think splitting the rennet, and stretching it with sticks, so that it will be of a single thickness, and will dry quickly, is the best and surest way to preserve a good flavor.

TO PREPARE RENNETS FOR USE.—Take as many gallons of water as rennets in number; put them in the water, blood warm; soak them twenty-four hours; stir them frequently in the time; strain the liquor and let it settle; make it as salt as possible; if any skum rises it should be skimmed off. While this liquor lasts a uniform strength may be relied upon. It should be stirred to the bottom before being used.

"Is milk more apt to sour from the effect of electricity, in tin vessels, than in wood?"

The ease with which tin vessels are kept clean, makes them preferable to wood. An opinion conceived by many, that tin vessels have a tendency to sour milk, at a season when thunder showers are frequent, is not an objection to their general use. There are other causes for milk's becoming sour, to be taken into account first. Excitement of cows from any cause will affect their milk, and they are more excitable in changeable weather, than when the weather is steady, cool or warm. In hot, damp weather, more cows will be in heat, and give bad milk, which if mixed with other milk at evening, will be a more direct cause for sour curd than any effect of electricity upon milk, after it is taken from the cow; and in such weather, milk vessels are not thoroughly dried, after being used, in which state they often get foul. An old barrel, put up in form of a leach, near the dairy room, and ashes thrown into it occasionally, and leached, and the lye used freely about cheese-cloths, press, &c., will remove one cause for sour curd. I use no wood vessels in my dairy.

"Is there danger of pressing a cheese too hard?"

Not any. If it has been over heated in the milk or curd, it may be pressed so dry that it will be a *lifeless* (tasteless) cheese, and so it would be if it were pressed lightly.

"Should the animal heat be allowed to pass off from the morning's milk?"

The most perfect affinity should be maintained among the constituent parts of milk that is curded or worked together, throughout, that it may not waste in working, and plague in curing. It is, therefore, necessary that all should be cooled and warmed alike. A. L. FISH *Litchfield, Herkimer Co., N. Y. May*, 1849.

Cheap and Valuable Paint.

EDS. CULTIVATOR—The Ohio mineral paint has been offered to the public as something very valuable, particularly to the farmer, for its durability and cheapness. I send you below, the detail of some experiments which I caused to be made a year or more since, for cheap paint. I believe it equal to the Ohio article in all particulars, and superior from its *greater cheapness*, it being within the reach of almost every one.

Experiment No. 1, was the mixing of *water-cement* with oil to the consistency of paint, and putting it on immediately. Any drying article used with oil paint, may be put in, if it be desirable to have it dry at once.

No. 2. *Cement* mixed with *coal tar*, or gas-tar, as it is sometimes called, I put in, in the same manner, without any drying mixture. You can vary the color by the addition of any mineral substance. The paint I have put on, is now as hard as stone, and was put upon rough boards that had been exposed to the weather for ten years. I have just had painted a small building of rough boards, battened sides and roof. The roof is covered with No. 2—the sides with No. 1. The color of both is stone. No. 1, nearly that of free stone, with a shade of handsome drab, and gradually becomes a little lighter. No. 2 is considerably darker, but this too becomes lighter by exposure to the air. I intend giving to the body of the building another coat, when sharp clean sand will be thrown against it, and I doubt not, but I shall obtain a rich imitation of free stone.

The water cement used was from Southington, Connecticut, known as "Moore's Cement."

It is not, like the Ohio paint, patented. CHARLES R. ALSOP. *Middletown, Conn., April* 27, 1849.

PROPER SELECTION OF STOCK.—At a late agricultural discussion in Derbyshire, Mr. G. Greaves remarked that the choice of a breed of stock was as important as the management. It seemed to him that enough attention was seldom paid to the particular kind of produce it was intended to obtain from stock. The same breed did not answer for feeding and for the dairy too; for the early maturity of stock and the propensity to fatten, were most observable when the generative functions were not so perfect, whereas the good milker was almost always a good breeder. For early feeding stock, it would always be advantageous to mix good nursing dams with sires that had a great tendency to fatten. He agreed in the opinion that feeding stock should be kept well when young; but calves intended for the dairy, and ewe lambs for the breeding flock, should not be made fat.

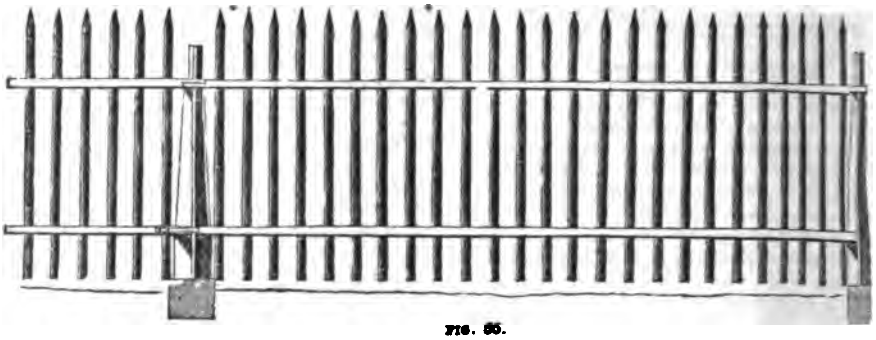


FIG. 55.

Coons' Patent Fence.

The figures herewith given, represent different forms of a fence invented and patented by Mr. M. P. COONS, of Lansingburgh, N. Y. This fence has been erected to more or less extent on several farms, and so far as we learn, has been decidedly approved. It is recommended as possessing the following advantages: 1st. Lightness of construction. 2d. Permanency and strength. 3d. Durability. 4th. Ease of construction and conveyance from place to place. 5th. Adaptation of being permanently placed on all kinds of soil without being injured by frost or wind, and its use as a temporary hurdle fence. 6th. The remarkably low price at which it can be afforded, and its neat and ornamental appearance.

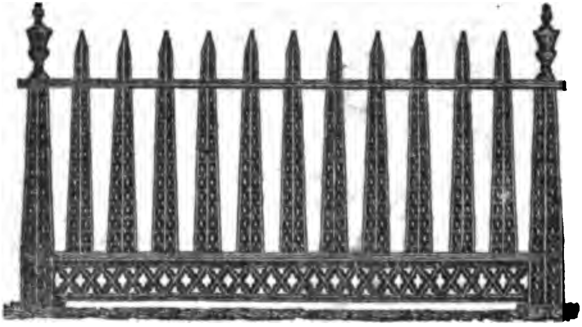


FIG. 56.

Fig. 55 represents a pannel of all wood fence,—that is, iron posts, wood bars and pickets, without base, with gate attached. This plan or grade of fence varies much in price; if made of first quality of materials, in six feet pannels, with base and iron ornaments, and the timber be of the first quality of pine, cedar, oak or chestnut, four feet high, at thirty-seven and a-half cents per foot; if made of spruce, hemlock, whitewood, &c., twenty-five cents per foot, all delivered in a finished manner, with ornaments, &c., complete.

This same pannel also may represent a stretch of twelve feet of common field fence; if made of good pine, oak, cedar or chestnut, without base, it is afforded at three dollars per rod; if made of spruce, hemlock, &c., from one dollar fifty cents to two dollars per rod. If base board and ornaments are required, they are furnished at cost prices.

All the wood bars are bored with a tapering augur or bit, from the lower side of the bar, thus forming a tapering or tunnel formed hole, the smallest part being at the upper side of the bar, the pickets may be more snugly drove without checking the timber, and consequently make a tighter joint, and the air is permitted to circulate freely around the timber underneath, thus preventing rapid decay of the picket and bar at the joint.

Fig. 56 represents a pannel of fence, all of cast iron, and is afforded at from one dollar to one dollar twenty five cents per foot, according to weight of iron.

Fig. 57 represents a patent hurdle or portable fence, which may be taken up and removed from place to place, with as much ease and facility as the bottom rails and blocks of a common rail fence may be placed and replaced. This invention consists in the construction of cast iron posts with holes cast in them at proper distances for attaching iron wire or iron rods, of any required size; if made expressly for hurdle fence, iron rods of three-sixteenths of an inch in diameter are considered the best. This kind may be made what is what is called tight fence, which will turn the smallest domestic animal; or may be so constructed as to guard only the larger animals, and the difference in the expense depends entirely upon the number and size of the iron wire or rods used, and the length of stretch from post to post, and height of fence. For example, a tight fence with three-sixteenth inch iron rods, twelve feet stretch, four feet high, at three dollars per rod. If of number ten wire, and sixteen and a-half feet stretch, it would not cost more than about one-half that sum. This last described style of fence may be better prepared and put up at its location. The posts for this fence will be furnished at four and a-half cents per pound, and full directions and the right of use will accompany the bill.

All the varieties of fence may be put down permanently or temporarily; if it is permanently placed, it still may be taken up and removed without any injury to the fence, at a small expense. The posts are constructed in such a form that they may be placed in a block of wood or stone, or an iron cope or foot.

If in stone, a hole is drilled in a stone of any form, of proper size, (as the shape is not material) two inches in diameter, five inches deep; the stone is settled down, within two or three inches of being even with the surface of the ground, and the post inserted and secured with iron keys, lead or brick dust.

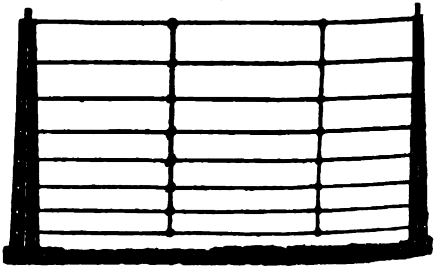


FIG. 57.

If blocks of wood are preferred, a hole is bored in the centre of a block of wood, of proper size, 2½ or 3 ft. long, or still longer, according to the height of fence, and laid in the ground transversely with the line of fence, and the posts are inserted by driving. If of iron, a wrought iron pin with a screw is used to secure the cope to the base.

For further particulars, inquire of **Matthias P. Coons**, Lansingburgh, N. Y.

The Farmer's Note-Book.

Farming in Western New-York.

Eds. Cultivator—On reading in the Feb. and March numbers of *The Cultivator*, F. Holbrook's description of Judge Hayes' farming on a hard, hungry, New England soil, we have a fine example of what industry, economy, and practical science will do towards making the "desert blossom as the rose." But it would be not less an interesting spectacle if we could once look upon a farm in this all alluvial* county, on which a tithe of the same labor and manure, had been thus judiciously expended and applied. 'Tis true, we have many good farmers in western New-York, men well read in the theory, and practiced in the details of their great calling, if we compare them with the mass of farmers in the same favored section of the earth's surface. But how will they compare with such masterly men as Adam Anthony, of Rhode Island, or W. A. Hayes of Maine, in the art of overcoming great natural obstacles, and the quickening of primitive sterility. As well perhaps, as the general who takes his troops to the battle field on steamboats or railroad will compare with the Carthagenian of old, who had first to soften and reduce the rocks before his army could scale the Alps, to look down upon the battle field.

It will be urged that necessity is alike the goad to genius and industry, and the mother of invention; but that our soil requires no such labor and expense as the barren detritus of New England, that the extra amount of crop would not pay for the outlay, &c., &c. To meet this stereotyped argument, I only ask for a tithe of the labor, and no other *amendment* to the soil, than a judicious making, saving and application of the manures which are inherent to, and may be made on the farm. I now appeal to those truly intelligent farmers of this (Seneca) county, who read *The Cultivator*, if a tenth part of the labor and expense bestowed by Judge Hayes in carting clay on his sandy lots, with the other amendments and extra tillage bestowed by him, would not enable them to grow twice as many bushels of grain to the acre as they now grow? or at least half as many imperial bushels to the acre, as is grown in England, on the best farms, under the best cultivation. But if the best Seneca county farmers are still behind some of those in Old and New England, they are second to none in New-York. The premiums awarded to farms in our county by the State Ag. Society, two years successively, as the best farms in the Empire State, are intrinsic evidence of the fact.

Much good is to be anticipated from the improved and improving practice and example of such men; while they adopt the mode of wheat culture, the very tidy farming of their immediate neighbors of German blood, they ingraft upon it those late discoveries in the composition of manure and the art of manuring, which properly belongs to agricultural science. Such is the force of the example of such individuals on the rural economy of this county, that even those farmers among us who have heretofore scandalized *book farming* as empiricism, begin now to yield to the occular proofs of what the book has done, and is now doing. In fact, many of our farmers begin of late to be impressed with the dignity of their calling; and to embrace the belief that the *book* is as necessary to the farmer, as to the mathematician, the architect, the lawyer or the priest. But there is still in every community of farmers, that egotistic impracticable class, which blindly abuses heaven's best treasure. Such men will never take the hint that the fat of their soil is not as indefeasible as their title to its measured acres, until they learn it in the diminution and failure of crop. Such men not only waste their manure, but their general practice of tillage is alike superficial, behind hand, reckless. When they are told in order to induce them to save their field and house ashes, that no plant can grow without the elements of its ashes, and that the ashes of all plants are nearly the same, their reply is, "I dont believe in your *book farming*." I sometimes think that the art, and I may now say the science of tillage, has no charms for such men, beyond the present food and dollars they force from the soil. The earth's products, instead of exciting the mind of such individuals to the interesting study of nature's laws, the *modus operandi* by which she produces and multiplies, in her vegetable and animal kingdoms, and then dissolves and reproduces from the scattered elements. It would seem that their marvelousness is the only faculty of the mind interested in the matter. As the Athenian raised an altar to the Unknown God, so do such self-blinded men, deify and erect an altar to the moon, as the patron saint of their trade and calling.

The farmers of western New-York have yet but a superficial knowledge of the inexhaustible treasure they possess in the rich diluvial formation of their soil; 'tis said that layers of hard pan are in some places deposited near the surface, but the subsoil generally contains organic remains, with all the salts necessary to produce the maximum yield of cereal grains, to a great depth. On the plateau of Varick and Romulus, the table land between the Cayuga and Seneca lakes, the soil is a heavy loam; when the forest was first cut off, great crops of wheat and other cereals were produced, but now the surface soil is worn down heavy and dead; water sometimes stands on a hundred fields until the summer months, so that the average yield of the cereal grains, according to the late statistics of our Ag. Society, is much lower there, than in the other towns of Seneca county. Draining is the panacea for such lands; their organic treasures are inexhaustible. One farmer in Romulus, whose farm is almost a perfect level, told me that the only perfect wheat he had grown for many years, was on the subsoil thrown out of the main ditch, which he had cut the same season the wheat was sown, to relieve the field from surplus water. S. W. *Waterloo, Seneca Co., March* 12, 1849.

Shall we make Composts?

In *The Cultivator* for January, 1819, I read a notice of a work entitled "*Scientific Agriculture," &c.*, by Dr. M. M. Rodgers. I have since procured the book, and in glancing over its pages, I came to the following, under the head of "*Composts:*"

"It was formerly supposed, that great advantage was derived from the combination of several different substances together, and forming what are called *composts.* The recipes for these compounds are numerous, and go to prove that the discovery of a good compost requires but little scientific or practical skill. When a compost heap is made up of several materials, which are all separately good manures, it follows of necessity, that the resulting compound must be a good fertilizer. But it is impossible to supply any more in this way, than if these several ingredients were applied to the soil separately. And a little knowledge of chemistry will show that by this means no new elements can be generated. Neither can any new property be developed which could not be done by their separate action. We see that whenever a substance which has little or no fertilizing power, is in this way manufactured into good manure, it is done at the expense of some powerful fertilizer which is distributed by the mixture, and consequently, loses just as much of its efficacy as the other gains. Thus, although this process serves to dilute and extend manures which are too powerful or too expensive, it absolutely supplies none."

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* I say alluvial, because diluvion is often without the elements of rich alluvion.

The author goes on still further to explain, that the principal advantages of composts, are the dilution of manures which are too strong when used by themselves. Thus, among other substances, he mentions "caustic lime," the object in using which, he thinks can be much better attained by mixing and diffusing it through some other substance, "such as saw-dust, sand, *barn-manure*," &c.

Now the inference from the above remarks is, that ordinary composts are unprofitable—that no effect is produced that would not take place if the substances were applied separately, and that, consequently, the labor of forming the compound is lost.

It strikes me that Dr. R.'s reasoning is not entirely sound, and that his conclusions are not wholly reconcilable with facts. It is not strictly true that the same effect is always produced by the use of substances applied separately, that would follow from their combination. For instance, peat, in its natural state, frequently contains an acid which is prejudicial to vegetation, and its fertilizing properties are locked up, as it were, until they are liberated by the action of some substance which causes a decomposition. Hence it has been found highly useful to mix with peat, alkalies of some kind, by which the acid is destroyed, and the peat brought into a soluble condition. Potash and ashes are used for this purpose; the ammonia of animal manure, urine, and all animal matters, produce a similar effect. Thus, Doctor Dana, in his *Muck Manual*, states that—"the power of alkaline action is alone wanting, to make peat good cow dung," and that—"by the addition of alkali to peat, it is put into the same state which ammonia gives to dung."

Here, then, is one example of the advantage of combining or mixing substances to be used as manure. But it may be asked—"Why will not the same effect be produced, if the peat and the alkalies are both spread, separately, on the same land?" For the obvious reason that they are not brought sufficiently, and for a proper length of time, into contact. The alkalies being spread over a larger surface, and exposed to the air and rains, are soon dissolved and carried into the soil below the peat.

But there are other advantages in mixing different substances in a manure-heap. The farmer should endeavor to save all the excrements, of his animals, both solid and fluid, as well as all other substances which are capable of enriching his land. The readiest way of saving urine, is to retain it by means of some absorbent—such as charcoal-dust, peat, loam, straw or other vegetable rubbish.

Again, if it were true that substances ultimately produced the same effect when applied to the soil by themselves, as when combined, there is still, in many cases, a *convenience* in composting. It is inconvenient to use corn-stalks, and other litter in their crude state. If applied to the surface, they do not readily rot, and they interfere with cultivation by obstructing the operation of the implements used. If buried beneath the surface,—which is not always readily effected,—they sometimes cause the soil to be dry and *huffy*. There is no way that these matters can be used to so good advantage as by mixing them with animal manure, and saturating them with urine. By this means, the ammonia soon brings on a decomposition, by which the fibrous structure is cut down and they are brought into a comminuted state, fit to be used as circumstances require. But we may cite other authority in favor of composts. J. Prideaux, an agricultural chemist of considerable distinction, advises to mix in the manure heap—"peat, sods, turf-parings, ditch and pond scourings, way soil, humus soil in whatever form, and ashes of all kinds. All *liquids* in which vegetable or animal matters have been soaked or boiled; and all that contain fertilizing materials, as soap suds, dish-washings, pot-liquor, &c. "We must remember," he adds, "that vegetable matters work sour, and that animal substances generate ammonia, which neutralizes the acid, and is fixed by it, so that in due proportion they correct each other. Urine gives most ammonia."

One word, before closing, in regard to mixing "caustic lime" with "barn manure," recommended by Dr. Rodgers, as one of the means of "diluting" the lime. This is a kind of compost that I am not in favor of. I had supposed, if any thing has been established by chemical investigation, that caustic lime should not be mixed with animal manures. Thus Prof. Johnston says, guano should not be mixed with quick-lime—"because the quick lime sets free the ammonia contained in the guano, and causes it to escape into the air." He observes, also, that "quick lime will, in the same way, drive off the ammonia contained in liquid manure, and in horse or farm-yard dung." Farmers who have bought poudrette that has been compounded with fresh lime, have often complained of its inefficacy.

T. Sedgwick, a writer in the English *Agricultural Gazette*, says—"The employment of lime with dung. is a most baneful practice, as it renders the ammonia caustic and volatile, to the greatest degree, and causes the loss of the most energetic portion of the dung When lands require lime, it should be applied separately, and avoid as much as possible, its contact with the dung."

The effect of mixing lime with animal manure, may be explained as follows:—Lime-stone contains nearly half its weight of carbonic acid. In the process of burning, the carbonic acid is *driven off; but the* lime has a constant tendency to return to its original condition by the re-absorption of the property it had lost. Animal manure contains ammonia, combined with carbonic acid. When fresh lime is added, it attracts the carbonic acid, which, uniting with the lime, sets the ammonia free, and it escapes. A. B.

Cost of producing Wool.

Eds. Cultivator—I commenced with the first number of *The Cultivator*, in 1834, and have been its constant reader ever since, and think I have been amply compensated for the time and expense devoted to it. I have been a farmer for over twenty years, and I yet feel a much greater need of being instructed myself, than of an ability to be an instructor of others in the great and important business of agriculture, to which I have devoted so many, and purpose to devote all the remaining years of my life. Yet I shall venture to give an opinion upon the subject of the value of the wool-growing business in this country, and in doing so, shall venture to differ from Mr. Randall and others, who may perhaps have had more experience in the business than myself.

Mr. Randall estimates the nett profit of wool-growing at 27 per cent. Others have placed it as high as one hundred and upwards. Mr. Pettibone, in some very sensible remarks published in your April No., puts the profits at six per cent., and yet, if I can understand his figures, he estimates that he had succeeded in clearing a much greater profit than that stated by Mr. Randall.

In the face of all these authorities, I shall venture to say, that for some years past, wool-growing has been a losing business to the farmers. We have in this country, the facilities for supplying the world with wool, and yet we do not supply a quantity sufficient for our own consumption. Mr. Lawrence estimates the deficiency of ten millions of pounds annually.

It would be an impeachment of the intelligence and enterprise of our farmers, if they failed to supply the country with wool, when the business of growing it afforded any considerable and reliable profit.

The census of Massachusetts, taken in 1845, will probably give as much true light upon this subject, as can be obtained from any other authority. Her farmers are doubtless as intelligent as can be found elsewhere. They are situated in the midst of manufacturing establishments. The period was one when these manufacturers were enjoying the highest rate of protective duties. If, under these circumstances, they did not make the business of wool-growing profitable, it must be conceded that it cannot be so throughout the country.

Their sheep numbered 355,043, of which near two-thirds were Saxons and Merinos. The wool produced was 1,016,230 pounds, or about 2⅞ pounds per head. The average price was 32 cents per pound.

It is universally conceded that it requires as much feed during the year to keep ten sheep, as it does to keep one cow. I have never known a cow to be kept during summer at less than twenty-five cents per week, nor during winter for less than forty. Upon this estimate then, the cost of keeping one hundred sheep during thirty weeks of summer, would be $75, and during twenty-two weeks of winter would be $88. If to these sums should be added five dollars for shearing and washing, it would make the annual cost of keeping one hundred sheep, $168. The value of the wool grown on one hundred sheep, according to the census for Massachusetts, was $88. To this add eighty per cent. for lambs, which would make the income just equal to the expenditure, without one cent for profit. It will be borne in mind that this result was produced under the most favorable circumstances, and while nothing is deducted for losses on the flock, the income for lambs is certainly rated much above what is generally realized.

As to the calculations of Mr. Pettibone—it is in the expense of summer keeping, that his estimates differ materially from mine. He estimates the weekly pasturage of sheep at seven mills per head, whereas I put it at two and a-half cents. Should he in that respect, make his figures to correspond with mine, it would have shown his profits to have been a little over six per ct., corresponding with his general estimate. To realise that result, required all his superior sagacity and experience, favored by extraordinary circumstances. His price for hay, six dollars per ton, is less than farmers generally can afford to raise that article. And eighty per cent. increase of lambs is not realised by a tithe of the wool-growers of the country.

It is important that there should be a right understanding of this subject. A want of such understanding, has already created feelings between the wool-producers and the wool-consumers, prejudicial to both. The manufacturers, deceived by such representations as those of Mr. Randall and others, have honestly believed that the wool-growers were in the enjoyment of enormous profits, and that if, with such enjoyments, they could not grow wool sufficient for the requirements of the country, no considerations of price could induce them to do so. They, in consequence, have not only neglected to offer such inducements, but may have actually felt themselves justified in resorting to ingenious devices, in order to reduce the price of wool. Thereby promoting their immediate interests, and creating to themselves ultimate injury. By discouraging the growth of wool at home, they have been driven to a foreign market for supplies.

On the other hand, the wool-growers, knowing that the profits of their business would scarcely justify its continuance, believe that the manufacturers do not exercise the liberality that their business would warrant them in doing. Animosities are thereby created, when it would be to the interests of both to entertain feelings of reciprocal kindness.

Were the manufacturers undeceived upon this subject, they would doubtless at all times be willing to pay as high prices for wool as their business would justify. Should the wool-growers receive as high prices for their wool as the manufacturers would pay, under a right understanding of this subject, I have no doubt they would produce wool to meet the required consumption of the country. POLYDAMAS. *Hillsdale, N. Y., May* 1849.

Analyses of Limestone.

EDS. CULTIVATOR—Ever since I read the analyses of corals, by Prof. B. Silliman, Jr., published in the *Am. Journal of Science and Arts*, a year or two ago, I have been fully convinced that our limestones, and more especially those presenting a great quantity of organic remains, would be found to contain all the essential inorganic constituents of plants. The sedimentary limestones are made up, in part at least, and I have little doubt, wholly of the remains of shell-fish and coralline structures, that inhabited the oceans of a former period; and since corals do contain all the ingredients that exist in the ash of vegetables, as the investigations alluded to demonstrate, therefore, analogically, we infer their presence in limestones. I had hoped long ago, to put my ideas to the test of experiment,—to submit several varieties of limestone to rigid analyses, but, suffering the penalty of being poor, this I have not accomplished. You may judge of my delight, then, to find these opinions fully sustained by the admirable article of Prof. PETER, in your April number.

The Trenton Limestone is a prominent rock in Lewis county, and from the vast quantity of fossil remains evident in it, it is doubtless as rich in the phosphoric and sulphuric acids, together with magnesia and the alkalies, as its equivalent, analysed by Professor P. The "Black River," "Birdseye," or "Gray" Limestone, of the State Geologists, also occurs here, immediately underlying a strip of land contiguous to the western side of Black River, running through the whole length of the county, being several miles in width. It is a harder and more compact rock than the "Blue limestone," and consequently, preferable for building purposes. Well characterised fossils are rare in this rock, and hence we might conclude the absence of their valuable constituents. But probably they do exist, and if analyses shows their presence, and gives quantitative results similar to those observed with regard to the more fossiliferous rocks, we shall have a good geological argument proving that difference in the appearances presented by the two members, arises from dissimilarity of condition, not of composition, and the causes of these differences may perhaps be considered their unequal exposures to heat and pressure, during solidification, and to unlikeness in the intensity of the convulsions to which the structures composing them have been subjected.

The strictures of the Professor upon the incomplete analyses that hitherto have been published are perfectly just, and greatly needed at the present time, when the desire of accomplishing much, tempts to superficial investigations, and premature conclusions; and when from the rapid advances chemistry has lately made, there is danger of considering our processes perfect;—while the reputation of some prominent individuals is such as in a measure to control the researches of others, rendering them liable to follow famous precedents, rather than reason and labor without prejudice.

Perhaps it would be well if these strictures were extended to a criticism, especially when even the labor of justly celebrated chemists in official capacity, has been wasted in some instances. There is nothing satisfactory to the scientific agriculturist in reading an analysis of a limestone stated as follows:

Carbonic Acid,	48 82
Lime,	31 12
Magnesia,	16 06
Insoluble Matter,	4 00
	100 00

Such exhibitions of professional folly may do for 50 years ago, but in the middle of the nineteenth century, we recognise no such substance as "insoluble matter" in our nomenclature. In this same insoluble matter may be hid the very pabulum of vegetable life.

There is a great deal of prejudice yet to be overcome before a rational and scientific agriculture is understood and practiced. From my own observation, I am convinced that the *scientific* light diffused by your valuable Journal, makes very little impression on the mental retina of hundreds of farmers who support it. The greatest extent of the good accomplished in many instances, is expressed in saying, that the mechanical appliances of farming are improved. It becomes, therefore, the interest as well as duty of him who would bring science to the aid of agriculture, to make every labor as complete as possible, and especially to avoid the dogmatic introduction or support of untested theories, and that narrow minded ignorance which entertains the possibility of making any *one* discovery, that shall remedy the failings of the present practice. Scarcely less despicable is that species of charlatanism which prompts the advertisement of agricultural nostrums. They are always to be suspected of those who entertain, as did Lord Bacon, the sentiment that "Knowledge, like the light of Heaven, is pure, *free*, exhaustless."

Much is to be hoped from the labors of scientific men, conducive to the interests of agriculture. The farmer has to deal with nature; to follow intelligently his business supposes a knowledge of her laws. Those laws are the professed object of the chemists inquiry, and hence follows,—what experience has a thousand times established,—the ability of the chemist, to fashion his practice, so as best to assist, and imitate nature and consequently, to gain from her the greatest amount of benefit.

Farmers' sons must be instructed in Natural Science The mind is the great instrument, and this mind must be cultivated. All are familiar with the difference between the crab apple and the beautiful grateful fruit that yearly adorns our orchards; no less difference is there between the mind native and cultivated. There is no better means of a speedy and harmonious development of means intellectual, physical and moral powers, than the study of nature. Do our great chemists, geologists, &c., fall behind mathematicians, and classical scholars in mental acumen or profundity? They certainly occupy a greater rank in view of the utility of their labors. The natural sciences offer this decided advantage ever every other study to the young farmer, that they are of direct application to the daily concerns of his life.

Let him then be more concerned to know the nomenclature of chemistry, than the Greek alphabet. Let him study Liebig before Virgil, and Boussingault before Horace. Not that I would cast any reproach on the study of the classics, but I would have education adapted to the wants of the educated. Every farmer should be thoroughly acquainted with chemistry, botany, zoology, &c., as affecting the principles of his art. Not that every farmer should be a chemist,—that would be impossible;—but many possessed of natural tact, might render themselves sufficiently expert in analysis to materially benefit their business, without interfering with it. The schools of practical chemistry that are springing up in our midst should be well supported by our farming community.

The reason why so few young men of talent and intellectual promise are found engaged in cultivating the soil, is that agricultural pursuits, as commonly practiced and understood, offer no gratification to the mind. The proper application of science to husbandry, will remove this evil; and so soon as provisions are made for the education of farmers, equal to those now furnished for physicians and lawyers, we shall behold the intellectual, as well as the physical energies of our country, devoted to the perfection of agricultural processes.

But I did not intend a lecture on book-farming, education, &c., and begging pardon for this desultory digression, I will conclude by recommending to the inhabitants of Lewis and every other county, that are supplied with calcareous rocks, a liberal use of lime upon their fields, and let some of them perform a series of accurate experiments upon its fertilizing powers, after the many good examples that have been furnished to them through the pages of *The Cultivator*.

"Blessed are ye that sow beside all waters, that send forth thither the feet of the ox and the ass."—*Isaiah.*
S. W. JOHNSON. *Deer River, Lewis Co., N. Y., April* 15, 1849.

Self Improvement.

"The proper study of mankind, is man."

So thought an old poet, and undoubtedly he was right. But, if we were to judge by the studies pursued by the great mass of mankind, we must come to a different conclusion. The acquisition of wealth seems to be the study of the present age, and gold is sought, it may be as eagerly, and at the same expense of health, happiness and life, by him who digs the soil, or wields the hammer, as by the individual that "leaves all" and seeks treasure on the brilliant banks of the Sacramento, and both may be equally deaf to the exhortation of the wise man—

"How much better is it to get wisdom than gold."

Human nature is the same everywhere, its study is the same, and a knowledge of it is of great importance.

"Know thyself." This should be engraven as with the "point of a diamond" on every one's heart, and kept continually before the mind. *Such* a study, rightly conducted and persevered in, would lead to the important duty of self improvement. That should be the object of study. Wiser and better, should be the sentiment. To labor with our hands is not our whole duty. The intellect *must not* be neglected. To improve in the management of business, is well; to improve the mind is better, being a greater result, and which will lead to the other.

How shall we improve?

Train the mind to right reasoning. There is a class of persons that are sadly deficient in this important faculty. Rising up early and sitting up late, and laboring hard, they can scarcely keep free from pressing want. The fault is not in their labor, but in their plans,—in the arrangement of their business. They do not adopt the *best* method to perform their labor, and consequently work to disadvantage. It is of no kind of use to be "hurried to death," from early in the spring till late in the fall. Sit down and calculate, taking all things into consideration. See how much you can plow, plant, hoe, and harvest, and then go to work systematically. Not only estimate the amount of your labors, but to do everything the best way, and do one thing at a time. It is folly to commence a piece of work and leave it half finished for something else, to be left incomplete. What ought to be done should be finished, and what ought not to be done should be let alone.

Cultivate order. "Order is Heaven's first law." How much pleasure there is in contemplating a well ordered family, or a *well ordered farm*. But some men are "terrible slack!" Look at their farms and you see it at once. Every thing is at loose ends. Their implements are scattered around, and exposed to all the variations of the weather. The space around their front door, may be, is a repository for hay carts and harrows, sleds and slabs, apple tree brush and ash barrels, and all the odds and ends that accumulate during the labors of the whole year. Where an article was last used, there it may be found. Having "a place for every thing and every thing in its place," will remedy all these evils. But an apple tree is no place to winter a scythe, nor the road side a place to summer a sled. All tools and implements when not in use should be kept under cover.

Be observing. Look around you and see the various methods in which your neighbors perform their labors. Do not suppose for a moment that you know more or can calculate to better advantage than others. Learn from the superior knowledge and tact of all with whom you are acquainted. Make your observation and experience available for your future improvement.

Read, study, and *think*. Every farmer should take an agricultural paper,—and that is not enough. Neither is his duty done when he pays for it. Nor should he be satisfied by simply reading it. It should be studied. Its suggestions should be reduced to practice whenever they can be made beneficial. The knowledge it contains should be treasured up, that we may compare others' experience with our own, and other theories with ours, so that if there is a "better way" we may adopt it. Reason must be exercised in all our labors, and

> "How can we reason but from what we know,"

and how can knowledge in relation to our business be acquired easier or cheaper than from agricultural journals. Strange that so many are blind to their own interests in this respect. The farmer that keeps a dog, or uses tobacco, or takes a political paper, has no valid excuse for not taking an agricultural paper.

Thus I have introduced an important subject and glanced at some of its points. To those accustomed to think, it may be suggestive, and can be considered as its importance demands. W. L. Eaton. *East Weare, N. H.*

Cattle in Chautauque County, N. Y.

Eds. Cultivator—The County of Chautauque, is perhaps, one of the best agricultural sections of the State of New-York, and particularly adapted to the breeding and rearing of stock. Hence it has been an object among our farmers, for a number of years past, to improve the breed of cattle, sheep, and horses. The short horns and that breed crossed with the common stock, have, until recently, been considered the most valuable, and yielding the greatest profit. A few years since the Hereford breed was introduced here,—at first they did not meet with general favor; it was feared that they were too small, and that they would reduce the weight of our cattle. Experience has proved such conclusions entirely wrong. The cross with the Hereford and our cows (they being generally of the short horned descent,) proves to be one of the greatest improvements in the breed of the Chautauque cattle that has yet been introduced, and will add much to the interest of the breeder and farmer. I cannot speak with as much certainty from my own experience, in regard to their quality for the dairy, but those who have proved them, recommend the richness of their milk in the highest manner, and rank them in the first class for the dairy. Thomas B. Campbell. *Westfield, Chautauque Co., N. Y.*

Profits of Fowls

Eds. Cultivator—In relation to the profits of fowls, I send you the following from my farm-account book:

1848.	
Dec. 1. Commenced wintering 203 fowls, worth 1s. each,	$25 37½
Fed to fowls during the winter,	
33 bushels of corn, at 56 cts.,	18 48
20 do oats, at 31 cts.,	6 20
7 do buckwheat, at 48 cts.,	3 36
Amount of debt, to March 1,	$28 04
1849. January 16th, sold 20 dressed fowls, weighing 70 lbs. at 7 cents per pound,	$4 90
Sold up to first of March, 128½ doz. of eggs, at 18¾ cents,	24 09
Amount of credit up to March 1,	$28 99
Since the first of March, to April 7th, I have sold 134½ doz. eggs, at from 11 to 18¾ cents per doz., which have amounted to,	$17 00
28 doz. eggs on hand, worth 12½ cents per doz.,	3 50
16 hens sitting on 20 doz. eggs, worth,	2 50
	$23 00
To which add income to March 4,	$28 99
Giving a total of,	$51 99
The cost of feeding from March 1, to April 7, was $8.20, which added to the charges of $28.04, up to March 1, makes the whole amount,	$36 24
Showing a clear income to April 7, of	$15 75

I do not keep a particular account of the number of eggs and chickens used in my family, but the number of eggs has been unusually large during the last winter. The eggs frequently, were not gathered till I returned from work late in the evening, in consequence of which, a large proportion of them were frozen, and unfit for market.

I have a very warm hen house, situated over a pig-sty, about 12 by 16 feet, with a door on the north side into a warm barn-yard, plentifully supplied with straw. My hens, during the winter, are allowed to roam where they please; but it is seldom they leave the yard. They are constantly supplied with corn in the ear, oats, fine gravel, burned oyster shells broken up, clam shells broken without burning, good water and a bin of ashes, lime and fine sand for them to wallow in. They are also fed every morning, four quarts of shelled corn, also, one peck meal, stirred into hot water until quite thick. The meal is composed of one part cob, one of corn, one of oats, and one of buckwheat, ground very fine. So much for winter management.

During the summer season, when they would otherwise be troublesome, they are confined in a yard contiguous to the *henery* on the north, (containing about ½ acre,) until after harvest; when they are again set at liberty. My hen-yard is one-third in grass, the remainder is plowed frequently, and two or three bushels of corn, peas, oats and buckwheat, sown on and dragged in. Then for a number of days there is quite a *scratching*, and as the blades spring up, they afford some good picking for the poor prisoners.

My flock is composed of about 145 hens, 15 cocks, and ten guinea fowls. About two-thirds of them were late chickens; some of them have but just commenced laying. I think the chickens and eggs used in my family, with the hen manure, more than pays for my trouble; therefore I make no account of either on settlements with my fowls. My fowls are worth 20 cents apiece.

Cr. by 170 fowls on hand, at 20 cents,	$34 00
Value of the produce sold and on hand,	51 99
Amount of Cr.,	$85 99
Original value of fowls, and cost of keeping to this date,	61 62
Amount of clear profits,	$24 37

Now, you disbelievers in the profits of fowls, show me a case in common stock breeding, where you come as nigh doubling your capital in a litttle over four months, and the manner in which it was done, without exaggerating, and I will give up that fowls can be equalled, but not beat as to profits. S. O. CROSS. *Kingsbury, Washington Co., April* 7, 1849.

Yoke for Unruly Sheep.

EDS. CULTIVATOR—To prevent sheep from becoming unruly, I would recommend good fence; but as they will sometimes get out and subject their owners to much damage and great inconvenience, I will state the mode that I have adopted and found to be good, after a trial of two years.

Take a stick about two or two and a-half inches in diameter, and two and a-half feet long, bore a hole with a three-quarter inch augur about two inches from each end, and from five to seven inches from them, bore another hole. Then take a hickory sprout large enough to fill the hole, put one end in and nail it; bend the other end around the sheep's neck and insert it into the other hole, draw it up just far enough to prevent the animal from slipping its head out, but not so tight as to be uncomfortable, and nail it. Then fasten the other end of the yoke to another sheep, in the same manner, and you have a yoke of sheep. In a day or two, they will learn each other's motion, and will remain quiet through the summer, and without any risk of accidents. I would advise to have the bows bent some few days before they are wanted. Take a stick of suitable size, and about eighteen inches long, bend it to the right shape, and confine the ends until it becomes dry. A PRACTICAL FARMER.

A rod of iron with a swivel in it, is much better than a stick of wood, for yoking sheep in the manner above described. The swivel prevents the sheep from twisting each other's necks. But as our correspondent says, it is better to have such fences that no hampering will be necessary. EDS.

Cost of making Pork.

EDS. CULTIVATOR—Having been a constant reader of *The Cultivator* for some time past, and being anxious to know the cost of making pork, I have looked with anxiety for articles on that subject, which would, in some measure, solve the problem; but as yet I have found none. I think the only way by which the farmers can demonstrate it, is, by experiments with various kinds of grain, and on different breeds of hogs, and by preparing the food in various ways, to ascertain what way it will yield the most nutriment—that is, make the most pork. In hopes of inducing some of your numerous subscribers to make experiments, and publish the results, or to publish some already made, by which something may be elicited that will, in some measure, solve the above, I now give the result of feeding 100 bushels of good peas to sixteen hogs, of various mixed breeds, as found in this section. The peas were boiled until fine, making what I call thick soup. After having fed the hogs on the same kind of food for two weeks, I gave them their morning feed, and weighed each one separate noting the weight. Twelve of them were about eighteen months old; one was a three years old sow, and three pigs were seven and a half months old when weighed. I found their total weight 4267 lbs., and after consuming the above amount, which took forty–two days, I weighed them again, and found that they gained 1358 lbs, and on the supposition that as they gained in flesh they shrunk in offal, I estimated their net gain to have been fourteen hundred pounds. Their drink consisted of ten pails of whey per day. It was allowed to stand forty-eight hours and the cream was skimmed off.

I find that there is a great difference in breeds of hogs. The three year old sow was small framed, and pretty full-fleshed, weighing 504 lbs. Her gain in the forty-two days was 66 lbs. The three pigs were from her, and showed traces of three distinct breeds of hogs. Their first weight and gain were as follows:—the first weighed 253 lbs.—gain, 97 lbs.; the second, 218 lbs.—gain, 75 lbs., the third, 171 lbs.—gain, 46 lbs. When butchered, the smallest one was the best pork, being the fattest. Two of the most inferior of the hogs gained one and a half pounds per day. Six, a mixture of the Berkshire, (I should think about one-fourth,) gained 1¾ lbs. per day. Three of the common stock of our country, gained 2¼ lbs.; and one of a superior kind, weighed 318 lbs., and in the forty-two days, gained 134 lbs. They were weighed on the 20th September, the first time. They were kept confined in a close pen, except once a week, I let them out for exercise, and to wallow, for the most part of a day. I fed them all they wanted to eat, without any regard to fear of cloying. PHILIP WING. *Farmersville, C. W., February* 2, 1849.

Fattening Calves.

EDS. CULTIVATOR—Allow me through the medium of your valuable paper, to say a few words to the dairy-men of eastern New-York and Massachusetts, respecting the relative advantages of fattening, fit for the butcher, or of destroying (their usual practice,) at four or five days old, their calves, for which, with a little attention, they might realize a handsome item in the yearly receipt for their agricultural products—leaving the inhumanity and barbarity of the practice of *deaconing* them, (as *killing young* is termed,) out of view. The increasing demand for meats of all descriptions in our markets, points, in my opinion, with unerring certainty, to the course which will bring the most money, with the least *labor and expense*, into the farmer's pocket, viz.: *to make the most* and best meat possible, of every animal suitable for the butcher, that he wishes to dispose of. I believe it is a well settled fact by dairy-men generally, that March and the first part of April is the best time for cows to drop their calves. In these months the farmers have leisure to bestow upon them the increased care required; the cows are stronger and more likely to do *well than* during, or just after a change from dry to green food; they are less liable to have inflamed udders and milk sickness than later in the spring. They shed their old hair better and earlier and go into the pastures stronger. The milk is worth less for butter and cheese, and nearly as much for making veal. There is ample time before your cows go to pasture to fatten every calf, and get for them from $3 to $5 per head. This course saves the trouble of milking in dirty yards or stables, and the dairy-woman from the onerous labor of making butter, or cheese, or both, at this unpleasant season of the year, when labor taxes their powers much more than in a later period of the spring. Let, then, every dairy-man procure a good bull of some of the improved breeds, at least two years old, give his cows good shelter with a little grain, (barley and oats ground together are best,) confine his calves in a pen kept entirely dry and clean, adjoining his cow stables—so situated that he can open a door and let them out to suck after the cows are tied up, with a trough nailed up on one side of the pen and kept well supplied with provender ground from barley and oats, and occasionally sprinkled with very little fine salt, and my word for it, which he can easily prove, he will realise, with less labor, *more pleasure and more cash*, than by the old barbarous practice of *deaconing* his calves. B. A. HALL. *New Lebanon, N. Y., May* 12, 1849.

New-York State Ag. Society.

The Executive Board met at Syracuse on the 10th and 11th of May. Committees to award premiums, and superintendents to direct the arrangements of the different departments of the coming fair were appointed. Grounds have been selected, and proper steps taken for its enclosure, and the erection of the necessary buildings, &c. The location is favorable, being but a short distance from the city, and comprising all the advantages of shade, with pleasant elevation, and suitable dryness of soil. Everything promises an excellent exhibition. We are happy to say that Professor J. F. W. JOHNSTON, of Durham, England, is expected to deliver the address on the occasion. In answer to the invitations extended by the Society, letters have been received from the President and Vice-President of the United States, and the Governors of several of the States, expressing their intention of attending the Fair. The letter of the President is as follows:

Washington, D. C., April 25, 1849.

SIR: I have received your favor of the 12th inst., extending, on the part of the Executive Committee of the New-York State Agricultural Society, an invitation to attend the next annual exhibition of the Society, to be held in September, at the city of Syracuse.

Deeply interested, as I have always been, in the cause of Agriculture, it would afford me the highest pleasure to be present at the exhibition. I shall endeavor to attend, and hope that my engagements will permit me to do so. In the mean time, I beg you to receive for the Executive Committee, my sincere thanks for their invitation, and my best wishes for the success of the cause in which they are engaged.

I remain with high respect,
Your most ob't serv't,
Z. TAYLOR.

BENJ. P. JOHNSON, Cor. Sec., N. Y. State Agricultural Society, Albany, N. Y.

NORTH AMERICAN POMOLOGICAL CONVENTION.—A meeting of this association is to be held at Syracuse, N. Y., on the 14th day of September next, at 10 o'clock, A.M.—that being the day succeeding the closing of the annual Fair of the New-York State Agricultural Society. Though the N. A. Pomological Convention is entirely unconnected with the N. Y. State Ag. Soc., it was deemed advisable for the Convention to meet at the time and place designated, for the better accommodation of the public who will attend the Fair from all parts of the country.

Wool Growing at the South.

EDS. CULTIVATOR—Two communications from southern gentlemen are published in your May number, in which questions are asked relative to sheep. They are referred by you to an article written by J. S. PETTIBONE, in which some of their inquiries are fully answered; but as you invite further remarks, I submit a few in reference to others, which are not answered in said article.

It is asked, "Are your sheep kept all the time in pasture, &c.?"

In the state of New-York, sheep are mostly kept on enclosed grounds, and with attention to change them frequently, they are generally healthy.

Many good shepherds give their flocks hay, whenever they will eat it, from four to five months in each year.

Sheep are liable to shed their wool when they have been nearly famished by "neglect," and afterwards thrive rapidly on grain or grass. It is desirable to keep them always in good condition, if necessary, with grain: a half bushel of oats daily, is given to a hundred young sheep in the winter season, by some of our wool-growers.

One man, with the exception of procuring fodder, will take care of 500 sheep, and with proper arrangements double that number; but it is doubted by some, whether sheep can be attended as profitably by slaves, as by freemen; where, comparatively, so great care, with so little labor is required; for flocks require care, as well as dairies, to make them profitable.

If the attention of the overseer was directed to the sheep, instead of the slave, that attention, with his labor alone, if devoted to the flock, would most of the year be sufficient; and the capital invested in the slave would be saved, with some "vexation" also; and the interest of said capital added to the slave's clothing, would hire a freeman; and a small number of freemen would build your fences and procure fodder, and might support themselves when old.

My farm contains 210 acres, 170 cleared; on which are kept 500 sheep; the labor is performed by one free, interested man, with the addition of two or three hands one month each year, to assist in getting hay, with but little care or vexation on my part. Instead of expending capital in the purchase of slaves, I would pay a part thereof in wages to freemen, (or to slaves made free.) Although a present loss is generally sustained by a change of occupation, I nevertheless believe, that an exchange of slave, for free labor, would be profitable, and right; as it is generally admitted slaves are careless and wasteful; while freemen, having different incentives to action, perform more labor, and better.

Would not the advance in the price of your lands, if worked by freemen, be equal to the value of several slaves?

Could the slaves be made free, competent overseers of various flocks, feeling an interest in their improvement, a vast amount of wool might be grown, (profitably no doubt,) in the south-western states, where the winters are mild, and the land cheap.

Many farmers at the north have become wealthy, while others have failed, in the wool-growing business.

One circumstance should be remembered, that many prosperous farmers engaged in the sheep business, have added greatly to their profits by the sale of bucks and breeding ewes, at very high prices, having obtained a reputation abroad; all could not avail themselves of this advantage. A CAYUGA WOOL GROWER. *Kings Ferry, May* 11, 1849.

Rearing and Feeding Stock.

The following is a summary of remarks made by Mr. LYON, in a lecture before the *Derby Farmers' Club.* The principles laid down are worthy of attention:

Young animals grow more quickly for a given amount of food than older. By high feeding, a lamb of Southdown breed (not a large sort) may be 15 or 16 pounds a quarter at a year old; at the same age, a young ox may be from five to six score a quarter. This produce, from the smaller quantity of food which animals consume while young, is equal to what they will yield in any subsequent year, from a larger quantity.

If young animals be reared well, or kept fat from the beginning, they acquire a constitution which ensures their growing more in subsequent years from a less proportion of food. The progeny of well-reared stock improves from generation to generation.

When an animal is in good condition, it yields a greater produce for its food than when it is poor and lean.

If, therefore, an animal be first fed on good pasture till it is fresh and fat, and then removed to poor keep, so as to lose its condition, not only is the food wholly lost on which it declined in flesh, but all the good food which it may consume for some time afterwards has very much less effect.

The feeding of animals should therefore be quite continuous, as well as liberal, in order to be fully profitable.

All animals pay best for that amount and kind of food which causes them to produce most largely. That which makes rearing stock grow and thrive fastest, that which makes feeding beasts or sheep fatten most quickly, and that which makes milking beasts milk most profusely, and for the longest time, is the most profitable kind of food.

The principle of continuous feeding is especially applicable to milking cattle. For if the milk be suffered to fall off, it cannot be brought fully to return, like the fattening propensity; and if, during the interval between the cessation of the milk and calving, the state of constitution which promotes the flow of milk decline, it requires a long period to bring out the full effect of the liberal food given afterwards, and the cow never yields so largely as she otherwise would have done.

It is always profitable to grow on land a succession of nutritious food for all stock kept on it. But in those cases where the natural produce of the land is deficient in richness, or where much straw, in proportion to other forage is grown, or where the casualties of season cause crops of cattle food to be deficient, it is always advantageous to add a portion of artificial strong food, such as cake, or corn, or linseed, to the food of animals, whether rearing, feeding, or milking stock

Smoking Potatoes for the Rot.

I have been informed by a gentleman of my acquaintance, that he had stopped his potatoes from rotting by smoking them. After the potatoes were dug and placed in the cellar, (an out door cellar,) he built a smoke and continued it eight or ten days, when the affected part dried up, and the rest of the potatoe remained sound and good through the winter. The remedy was discovered by placing fire in an unfinished cellar, to prevent the vegetables from freezing—immediately after which it was found that the potatoes had stopped rotting. He says he has tried the experiment for two or three years past, and has never known it to fail of arresting the disease immediately. O. P. K. *Green Bay, Wisconsin*, 1849.

Preservation of Wood.

Some experiments made in England show that soaking wood in lime-water effects its preservation to a remarkable degree. A house was erected forty years ago, in which Scotch fir was used for timbers. A portion of the timber was soaked in lime water, and a portion used without such preparation. The former is still sound, while the latter is much eaten by worms, which, as is well known, usually destroy this kind of wood in a few years. The method of saturating the wood is described as follows: "In preparing wood for the purposes of building saw it into such lengths as the occasion demands; next, plunge the planks or beams into a pond of lime-water. The pond is made thirty or forty feet long, five or six feet deep, sixteen or eighteen feet wide; and the bottom and sides are rendered water-tight. It is then filled with cold water. Before receiving the wood, a quantity of fresh-burned hot lime is thrown into the pond, which is well-stirred with the water to dissolve as much as possible of it. Into this strongly impregnated solution of lime-water, the wood, in the various shapes it has been sawn into, is then thrown. As lime-water absorbs carbonic acid from the atmosphere, the lime previously held dissolved in the water becomes insoluble, and is slowly abstracted from the water, and deposited at the bottom in a solid state, as mild lime or carbonate of lime; hence the necessity of now and then throwing in fresh portions of recently calcined lime, that the water may be resaturated with the strongest solution of this caustic alkaline earth"

The timber remains in the water from two to three weeks. The lime is absorbed by the pores of the wood, and appears to destroy the albuminous and saccharine principles, or so changes them that the wood no longer affords the food on which worms subsist. The slight petrifaction which the wood thus undergoes, prevents air and moisture from penetrating it, and renders it almost indestructible. It should be thoroughly seasoned before it is used.

Experiment with Potatoes.

Eds. Cultivator—If you think the following account of an experiment on a small scale, worthy a place in your columns, it is at your service.

About the 22d of May last, I planted in my garden four hills of potatoes, three feet apart, at the corners of a square, thus:—A B
C D

In each hill was placed about a pint of charcoal dust, with no other manure. Two potatoes were cut in two lengthwise, and half off each potato put into each of the hills A and B. Two other potatoes were divided between hills C and D in the same manner. This was done that the seed in A and C might be as near like that in B and D as possible.

June 13th—The potatoes were hoed, and manured with a compost of one part guano, one part charcoal dust, and three parts earth, which had been mixed three or four days, and stirred several times during that period,—a handful of the compost being hoed into each hill.

June 20th—The stalks being from six to ten inches high—the end of every stalk and twig of hills B and D was picked off, those of hills A and C being left untouched. The number of stalks in A and C was precisely the same as the number in B and D. They were hoed twice more, but no more manure was applied.

About the 20th of July, the ends were *again* broken from every stalk and twig of *hills B and D—A and* C being left untouched, as before. A few of the leaves dried up during a drouth in the latter part of summer; no symptom of disease appeared, however. The vines dried gradually, and on the 12th of October the potatoes were dug, washed, and when dry, weighed. No diseased ones were found. The potatoes have been preserved to the present time, without any appearance of disease. They are of an irregular shape, yellow, with pink eyes; the name of the variety I do not know.

The potatoes from A and C, weighed 6 lbs. 9½ oz., those from B and D, 7 lbs 1 oz. The largest potato from A and C weighed 7 oz.; three from B and D, weighed 8 oz. each. Those from A and C measured just half a peck, heaped measure; those from B and D a little more. A and C produced 33 potatoes, only four of which weighed less than 1 oz. each; B and D produced 37 potatoes, only five of which weighed less than 1 oz. each.

The only difference in the treatment of the two pairs of hills consisted in topping the vines of one pair, and leaving the other untouched. The result can afford no aid in the decision of the question whether topping the vines will prevent decay, as no decayed potatoes were found in any of the hills; and indeed, not in this region, as far as the writer's knowledge extends. The treatment may, however, have a tendency to increase the crop. The hills not topped produced at the rate of 302½ bushels to the acre, allowing a square yard to each hill; while the hills topped produced 1-14th more, or 324 bushels to the acre. Whether the extra 21½ bushels would pay for the extra labor, is a question. The end might be partially secured by mowing the tops twice during the season, before the vines begin to fall upon the ground, care being taken not to cut them too short.

It would have given me pleasure, and would have been more satisfactory, to have been able to try the experiment on a larger scale; but a lot 100 feet by 30, with a house and grass plot occupying more than half of it, does not furnish very extensive facilities for farming purposes. ROBERT D. WEEKS. *Newark, N. J., March 6th*, 1849.

Rust in Wheat.

The Directors of the Saint John (N. B.) Agricultural Society, in their report for the year 1848, make the following remarks as one of the causes of rust in wheat. They observe that the ideas are thrown out rather as a supposition than an opinion, and are designed to excite inquiry:

"The oat draws nutriment from the earth by side roots, which spread *over* the ground. The wheat plant has similar rootlets; but in addition thereto, when about to head, sends down a tap root into the earth, for the purpose, it may be presumed, of procuring that additional nutriment which its large rich ear requires; and this tap root has been known to go down to the depth of four feet. We may observe, that up to the time of sending down the tap-root, the wheat is the hardiest and thriftiest of all the cereals, but afterwards the most liable to disease. This delicacy is readily accounted for, when we consider that land is generally undrained—that not more than a few inches of soil get the benefit of sun, air and manure, and that, therefore, the root must encounter in its downward travel, nothing but disappointment. It comes in contact with the cold clay, or a sour, wet subsoil, turns back in despair and dies. In accordance with the laws of nature, insects or rust, which is itself a fungus, or vegetable insect, comes to finish the work of devastation on the dying plant. The forlorn farmer rails at the climate, and cries out that his wheat is killed by rust, while in fact it has died from starvation—from the want of that food which, as a provident husbandman, it was his duty to have provided for it."

Barn for Cows.

EDS. CULTIVATOR—Traveling in 1848, in the great dairy district of Ohio, the Western Reserve, I became acquainted with your paper, which I found among the dairymen there. I immediately ordered *The Cultivator* for myself, and have since been in regular receipt of it.

As I became convinced of the profits of dairying while among my friends in Ashtabula and Trumbull counties, Ohio, I determined to turn my attention more particularly to that branch of business. In January, 1848, I bought twenty cows—having previously kept sixteen. To my friends in Ohio, and to your paper, I am mostly indebted for my knowledge of dairy management. In November last, I commenced building a barn for my cows, something on the plan given in *The Cultivator*, in the June number, 1847. There is an aisle through the centre of the barn, lengthwise, a manger and trough for each cow, a platform on which the cows stand, a gutter to receive the manure, and a walk next the wall, on which to set and carry milk.

I had studied much for the best method of removing the manure from the barn, and how or where to secure it from wind and rain, and how to save the urine, when taking up *The Cultivator* one evening, I found a cellar mentioned for the purpose. This was a new idea to me, and I regretted that I had not received it before. However, I then got screws and raised my barn so as to admit of a cellar. This improvement I consider of great importance. I shall probably use a part of the cellar for storing carrots, which I shall raise for my cows. G. A. HANCHET. *Potsdam, N. Y*

Artificial Fish-Ponds.

The *Ohio Cultivator* gives the mode of constructing fish ponds, as practiced by JACOB HOFFNER, near Cincinnati. He says much care should be taken to prevent leakage, especially when craw-fish abound. These animals make holes through embankments, and let off the water. To guard against this, the sides should be lined with lime cement. The ponds should be made of irregular shape, having shallow bays and estuaries, where the smaller fishes can sport out of the reach of the larger ones, which seek to destroy them. It is observed that, unless the pond is quite large, so as to afford them sufficient range to gather insects and vegetable substances, the larger kinds of fishes, must be fed two or three times a week, with scraps of bread, meat, and other refuse matter from the table and kitchen; but the gold fish, and other small kinds, even though confined to limited space, seem to thrive best without any other food than that derived from the water, and the small animal and vegetable substances that may be found therein.

Notices of New Publications.

PIONEER HISTORY OF THE HOLLAND PURCHASE of Western New-York: embracing some account of the Ancient Remains; a brief history of our immediate Predecessors, the Confederate Iroquois, their system of Government, Wars, &c., a synopsis of Colonial history: some notices of the Border Wars of the Revolution: and a history of Pioneer Settlement under the auspices of the Holland Company; including reminiscences of the war of 1812; the origin, progress and completion of the Erie Canal. By O. TURNER. Buffalo, JEWETT, THOMAS & Co.

The "Holland Purchase" originally embraced that portion of the State of New-York now comprehended by the counties of Allegany, Wyoming, Genesee, Orleans, Cattaraugus, Erie, Niagara and Chautauque—a tract containing nearly four millions of acres. The design of the author of this work, as expressed in the title, has been to embody the principal events connected with the settlement of this region, from the first attempt of the French to colonise it, and its subsequent purchase by the Holland Company, down to its rapid improvement in population and wealth, after the construction of the Erie Canal. Events not regarded as belonging to the *pioneer* history of this section of country, have been purposely omitted, as inconsistent with the plan of the work; but a mass of very interesting and valuable matter has been collected, which does great credit to the industry of the author, and cannot fail to be highly appreciated by the people of Western New-York, many of whom have a direct and personal interest in the scenes so well portrayed in this volume. Several biographical sketches, with portraits, are given of prominent individuals, who were in various relations connected with the settlement and early directions of public affairs in the district. The book is handsomely printed, and contains 666 pages, octavo. It will be seen by the following certificate, that this work is recommended for School District Libraries; a recommendation in which, especially so far as relates to Western New-York, we heartily concur:

Albany, April 28, 1849.

From the examination which we have been able to give to the "History of the Holland Purchase," by ORSAMUS TURNER, Esq., we consider it a work of great interest and of much intrinsic value. It embodies a mass of authentic information, exhibiting in a clear light the early annals of Western New-York, its tardy advances in settlement during the period anterior to the last war with Great Britain, many incidents of the war and the subsequent condition of the settlements, and the rapid developement and improvement of the country, since the completion of the Erie Canal, thus presenting a view of American progress, which can hardly fail to be acceptable to intelligent minds. Deeming it desirable that the local history of the several sections of the State should be preserved and disseminated, we cordially recommend this volume, as a production highly creditable to its author, and worthy a place in the School District Libraries of the State.

CHRISTOPHER MORGAN.
WASHINGTON HUNT.
ALVAN HUNT.

Third Annual Report of the Board of Agriculture of the State of Ohio.—This report, like those which have preceded it, consists chiefly of statements in regard to the products and condition of agriculture in the several counties of the state. They show, generally, an improvement in most departments of husbandry. The President of the Board states that an increasing taste for agricultural reading is being manifested among the people of Ohio, and that "the spell which so long bound them to the traditions and practices of their fathers is partially broken." Ohio has great natural advantages, and we are happy to see that progress is made in their development. The board have resolved to hold a State Fair at Cincinnati, on the 5th, 6th and 7th of September next. A large amount of money is offered in premiums, which are open to competition from other states, and there will be an extensive and interesting display.

Chemical Technology; or chemistry applied to the Arts and Manufactures. By Dr. F. Knapp, Professor at the University of Giessen; translated and edited, with numerous notes and additions, by Dr. Edmund Ronalds and Dr. Thomas Richardson. First American edition, with notes and additions by Professor Walter R. Johnson, of Washington, D. C.

This excellent work consists of two handsome octavo volumes, printed and illustrated in the highest style. The first volume has been previously noticed in our columns; the second is before us, and is deserving of the same high praise which was bestowed on its predecessor. It is a work of great value, written by one who has evidently devoted much study and practice to the subjects on which he treats. It includes the most recent improvements in regard to chemical processes, and the illustrations are full and complete. The present volume contains two hundred and fifty wood engravings. Published by Lea & Blanchard, Philadelphia.

The American Bee Keepers' Manual; being a practical Treatise on the History and Domestic Economy of the Honey Bee, embracing a full illustration of the whole subject, with the most approved method of managing this insect through every branch of its culture, the result of many years' experience: By T. B. Miner. New-York: Published by C. M. Saxton.

This is a work of 334 pages, "got up" in a very neat style, and illustrated with well-executed wood engravings. The author has made a readable book, giving directions for the management of bees, based, generally, as he informs us, on his own "practical experience" extending through "many years." His views on many points, are different from writers who have preceded him. Those interested in the subject will, of course, examine, compare, and judge for themselves. He is pretty thorough in his "condemnation" of "patent" hives generally, and were it not for the encomimiums bestowed on one styled "*Miner's Patent Equilateral Beehive*," which he considers the "*ne plus ultra* in every point," we might almost be led to infer that there had been no improvement on the most primitive structures for bees. This last mentioned hive is not fully described, as the author thinks "the full particulars cannot be given and do justice to himself." It obviously has merits however, though we confess our inability to discover its superiority, from what the author allows to be made public, over some other hives with which we have had more or less acquaintance for twenty-five years.

Answers to Correspondents.

Compost.—Ontario Farmer. The addition of lime to your manure would tend to liberate the ammonia, and we do not see that it would be any benefit to the materials you mention. See an article on composts in this number.

Cabbages.—B., Montgomery county, Pa. The best soil for cabbages is a deep moist loam. The plants are set from two to three feet apart, according to the size of the variety. The price in this market is from two to four cents a head in the fall, and five to eight cents in spring. We are not prepared to give any definite information as to the quantity or price of *krout* sold in the "principal markets." Inquire of some one connected with the vegetable market in New-York.

Broom corn for Soiling.—P. S. B., Petersburgh, Va. It is not so good as the common corn. It has been tried, but the stalks are not well relished by any kind of stock.

Potato Disease.—S. A. B., South Edmeston, N. Y. For experiments with lime and other substances in connexion with the potato disease, we refer you to our back volumes, especially to that for 1848, *pp. 191—2.*

Poultry.—J. V. K., New-York. The breeds of fowls combining most "beauty" with the qualification of "good layers," and a "substantial carcass for the table," are the Black Spanish, Dorking, Game, and some varieties or crosses of the Malay, when *well bred*—such as those called Chinese, Jersey Blues, &c. The extent of ground for the confinement of fifty fowls, ought not to be less than one-fourth of an acre. *One* cock will answer for ten hens. For the production of eggs, it is not indispensible that a cock should be kept with the hens, and for "market purposes" it makes no difference in the value of the eggs. We are not aware that any experiments have ever definitely settled the question whether the *number* of eggs is increased or diminished by cocks being kept with hens. To make *money* by rearing "fancy poultry," skill and attention, with ample accommodations are required in breeding and management. It is not every one that can breed pigeons or other birds "*to a feather*," but there are some who can. For feeding fowls, a variety of grains and other food, is preferable; but if only one kind can be had, we should choose wheat screenings or buckwheat.

Character of Soils.—A. S. H., Bethlehem, Pa. The information you desire, could, probably, be given by a man of good practical observation, who was acquainted with the different kinds of soil, as they are commonly designated. Such a person is generally able to form a pretty correct opinion as to the capabilities of a soil, and its adaptation to different crops. It is in this way that lands are usually selected, though we have no doubt that analysis would, in many instances, suggest useful ideas.

Saxons *vs.* Merinos.—E. H., Cleveland, Ohio. The *match* which was to have taken place as arranged at Lowell, a few years since, never "came off."

Notes for the Month.

Communications have been received since our last, from Agricola, Charles R. Alsop, P. S., B., L. Durand, G. W. Barnett, Ontario Farmer, Polydamas, A Subscriber, W. Torrey, Reviewer, Penneypack, Henry Ancrum, B. A. Hall, L. A. B., P. and S. A. Wood, A. L. Fish, Northerner, J. V. N., W. L. Eaton, W. R. S., S. B. Buckley, A. K., A Cayugua Co. Woolgrower, Lotan Smith.

Books, Pamphlets, &c., have been received as follows:—Third Report of the Board of Agriculture of Ohio, from M. B. Bateham, Esq.—Knapp's Chemical Technology, vol. II, from the publishers, Messrs. Lea and Blanchard, Philadelphia.—Miner's American Beekeeper's Manual, from the publisher, C. M. Saxton, New-York.—A large package of Shrubs and Plants, from John J. Thomas.—A package of Plants from Col. M. P. Wilder, Boston.—Report on the Breadstuffs of the United States, made to the Commissioner of Patents, by Lewis C. Beck, M.D., from the Patent Office.—Pioneer History of the Holland Purchase, by O. Turner, Esq., from the publishers, E. R. Jewett & Co., Buffalo.

☞ Mr. Samuel Riddle, of Pittsburgh, Pa., is an authorised Agent for "The Cultivator," and "The Horticulturist."

Agricultural College and Experimental Farm.—In our last, we mentioned the steps which had then been taken in reference to this institution. Two of the commissioners whose names were given, Messrs. Wadsworth and Lott, having declined their appointment, their places were filled by Hon. John Greig, of Ontario county, and E. C. Frost, Esq., of Chemung. The Board met in this city on the 16th of May, and organized by the choice of Mr. Greig, as President—Mr. B. P. Johnson, acting (by request) as Secretary. The general outlines of a plan were agreed on, and a committee, consisting of Messrs. Beekman, Downing, Blunt, Cheever and Risley, was appointed to prepare details, to be submitted to the Board at their next meeting, which is to be held at Syracuse, on the first day of the State Fair—11th of September next.

Prof. Norton's Lectures.—We learn that the course of agricultural lectures delivered by Prof. J. P. Norton, of Yale College, during the past winter, was received with great approbation. Mr. L. Durand, of Derby, Ct., who attended the course, informs us that his class consisted of 25 members, most of whom were young farmers. Mr. D. speaks in high terms of the practical value of the instruction given by Prof. N., in which expression, he says, all the pupils entirely concur.

Esterly's Harvesting Machine.—In *The Cultivator* for 1845, page 25, we gave a cut of this machine. The inventor has been almost constantly engaged for two or three years past, in improving its construction and operation. We see by notices in the *Prairie Farmer*, that several farmers have used it with great success. Elijah Wilcox, of Elgin, Kane county, Ill., states that he used it last year, and was able to gather fifteen acres of wheat a day—"taken in fair standing order." The force required to do this, was three men, two boys, (twelve and fifteen years old,) and four horses. Two horses could propel the machine, but its operation was better with four. He says all the labor was done by horse power, except pitching the grain from the machine, and stacking it. He comes to the conclusion that "it is the neatest and most perfect way that crops were ever gathered." The machine gathers the heads of the grain, which are put up in ricks or stacks. Mr. W. says it came from the stacks, when taken for threshing, dry and in good order, not a bushel in 500 being in any way injured.

The Season.—Notwithstanding the mildness of the first part of the winter, and the sudden transition to extreme cold, the prospect is good for most kinds of fruit, in this vicinity. South of Philadelphia, as we are informed, a large portion of the fruit was destroyed by the unusually cold storm which occurred about the middle of April. Here, the buds were so little advanced that they generally escaped injury. Of peach blossoms, we had but few, but of apricots, plums, and cherries, there was a good show. Pears and apples bloomed well. We had a great lack of moisture, in this section, from the first of February to the middle of May, while at the same time, the country at the south-west was deluged with rain. Of late, we have been favored with light rains, which have answered the purposes of vegetation.

Culture of Flax.—A correspondent at Mt. Vernon, Ohio, states, that he has been informed that a kind of flax is raised in some of the eastern states, perhaps New Jersey, which produces from 18 to 20 bushels of seed per acre; and wishes to know whether such is the fact; if so, what is the name of the variety, and where can the seed be had. He wishes to know, also, the best kind of flax for lint. We shall be pleased to receive any information in regard to this subject.

Albany and Rensselaer Horticultural Society.—We have received the Second Annual Report of this Society, giving its proceedings for 1848, and a list of premiums for 1849. There are to be five exhibitions during the year, all of which to be held at the Old State Hall, Albany. The first is to be on the 13th of June. The funds of the Society having been considerably augmented, the premiums have been proportionately increased and enlarged, and we presume the exhibitions will be superior in extent and variety to those of former years.

Sheep Husbandry.—We have received a circular from Mr. H. Ancrum, of Ashby, Pike co., Missouri, in relation to forming a joint stock company for keeping sheep, on a large scale. He proposes to furnish the land and all necessary management for the sheep, himself; but he does not definitely state the terms on which the business is to be regulated, and the profits divided. He states that he has had twenty years' experience in Europe and nine years in this country, in the management of sheep, and can show satisfactory testimonials of his ability in this respect. We presume particulars in regard to his plans can be learned by application to him.

A Good Example.—Mr. C. T. Alvord, of Wilmington, Vt., writes,—"I may be mistaken, but I think this town, for this year, will bear a favorable comparison with other towns, as a reading community, all things being taken into consideration. We take, at the present time, 83 copies of The Cultivator, between 40 and 50 of the School Journal and Vermont Agriculturist, about 12 of the Boston Cultivator, 6 of the New England Farmer, and 1 of the Genesee Farmer; these being about one-half of the regular newspapers taken in the place. The town embraces a section of country six miles square, lying on the eastern slope of the Green Mountains, and containing one of the highest peaks within the boundaries of the state. The surface is generally rough and uneven, and a large portion of it yet remains covered with timber. The inhabitants, about 1200 in number, are mostly engaged in that part of agriculture which consists in the raising of neat stock, and the manufacture of butter and cheese, to which is added, in the spring season, the making of maple sugar."

THE HORTICULTURIST, AND JOURNAL OF RURAL ART AND RURAL TASTE. Edited by A. J. DOWNING, Esq., author of "Landscape Gardening," "Fruits and Fruit Trees of America," and other works.

The third volume of this work is just brought to a close; the fourth will commence in July. The steady increase of its subscribers, and the constant demand for back volumes, evince the value of the work in the public estimation. It will continue under the supervision of Mr. DOWNING, and will as heretofore, receive the contributions of the most able horticulturists in the country; and no pains will be spared, either on the part of editor or publisher, to sustain the reputation and high character of the work. It is published on the first of each month, by the proprietor of *The Cultivator*, at $3 a year—each number containing 48 pages, printed on fine paper, and executed in a style equal in every respect to the best periodicals in the country.

AMERICAN JOURNAL OF SCIENCE AND ARTS.—The number of this work for March, contains, among other articles, the following: Notice of and Citations from a Voyage of Discovery and Research in the Southern and Antarctic Regions, during the years 1839—43, by Capt. Sir James Clark Ross; on the Fundamental Principles of Mathematics, by Prof. Stephen Alexander; On a New Table of the Pressure of Steam at various temperatures, by J. H. Alexander; On the Dispersion of Light, by Prof. Chas. G. Page; Observations on some points in the Physical Geology of Oregon and Upper California, by James G. Dana. Published at New Haven, Ct., every second month, at five dollars a year. Conducted by Messrs. SILLIMAN & DANA.

MILDEW ON GRAPES.—W. L. E., East Weare, N. H. Various writers recommend the use of sulphur as a remedy for mildew. If the grapes are in a house, the floor is to be dusted with it, early in July. If the fungus makes its appearance, the floor is to be syringed and the foliage and fruit dusted with the sulphur.

COMMISSIONER OF PATENTS.—We are gratified to learn that THOMAS EWBANK, Esq., has been appointed Commissioner of Patents for the United States. Mr. E. is thoroughly acquainted with the science and history of mechanics, as is proved by the valuable works he has written on the subject, and we think it fortunate for the country that a person of his attainments has been secured for that important station.

MANUFACTURE OF AGRICULTURAL IMPLEMENTS IN ALBANY.—By reference to the advertisement of Mr. EMERY, in this number, it will be seen that Messrs. Wheeler & Co., have removed their establishment for the manufacture of horse-powers and other machines and implements, from Chatham to this city, and have commenced operations on a large scale in the new building lately erected by Mr. Emery.

A **FINE HORSE** called "Morgan Hunter" was lately taken through this city by Mr. WIER, of Walpole, N. H., and sold, as we learn, to Messrs. H. R. ACKLEY and A. S. GILBERT, of East Hamilton, Madison county, N. Y. He was got by "Gifford Morgan," and his dam was by the same horse. Persons who want to know what a Morgan horse is, will do well to examine him.

PROTECTION OF TURNIPS FROM THE FLY.—White mustard, sown with turnips, is considered one of the best means of protecting turnips from the insects usually called *the fly*—a species of *haltica*—which devours the plant as soon as it makes its appearance above ground. Large crops are often thus destroyed in a single day. The advantage of the mustard is, that it starts quicker than the turnip, has a large and tender seed-leaf, which the insect is quite as fond of as of the turnip, and being so much more conspicuous, the mustard is eaten and the turnip saved till it gets into "rough leaf," as it is termed, in which state it is generally safe from attack.

PROFESSOR JOHNSTON.—We have stated in another place that this gentleman, so well known as a chemist and writer on the sciences connected with agriculture, is expected to deliver the address before the New-York State Agricultural Society, at its meeting at Syracuse. He will probably arrive here as early as the month of August, and, as we are pleased to learn, contemplates spending several months in the different sections of our country. We are informed that he has consented to deliver a course of lectures before the Lowell Institute at Boston, during the next winter; and we hope other associations will avail themselves of the opportunity of securing his valuable services while he remains among us.

MR. VAIL'S SALE OF SHORT HORNS.—It will be remembered that this important sale takes place on the 13th instant. It will, probably, call together a large number of farmers, who will avail themselves of this opportunity of obtaining fine animals of this celebrated breed.

The following is a copy of a letter lately received by Mr. VAIL from COL. WADE HAMPTON, of South Carolina:

"*Dear Sir*—The bull I purchased of you, is not only the best I have ever had, but superior to any I have ever seen. His get are very beautiful, and exhibit all the evidence of high blood. I have been a breeder of Short-horns for nearly forty years—have imported several bulls, and bought at various times, others, from the best herds at the north, but have never owned one whose stock has given me such entire satisfaction. W. HAMPTON."

FARMING IN AROOSTOOK.—A correspondent of the *Maine Farmer*, states that he began farming in this district in 1846. He gave one dollar an acre for his land in the "wilderness state," and *three dollars* an acre for felling trees, and one dollar an acre additional for "chopping the limbs,"—making the cost of clearing, including the board of the men, eight dollars per acre. He gives the following account of the profits of an oat crop produced on three acres of this land. He sowed six bushels of "small Russian oats" on the three acres, in the spring of 1848, and the yield was 225 bushels, weighing 35 to 38 pounds to the bushel, and yielding 22 pounds of meal to the bushel, deducting from which one-sixth for the miller's toll, leaves 18⅓ pounds to the bushel, worth $5 per hundred. The account is stated thus:

DR.—To felling and clearing three acres of land, ...	$36 00
Six bushels oats for seed, ...	5 00
Myself two hours to sow same, ...	50
Boy and horse three days to harrow them in, ...	4 50
Twelve days' reaping, binding and shocking, ...	18 00
Man, boy and team 1½ days, to haul them to barn,	5 00
Man 12 days in winter to thresh them out, ...	15 00
Taking them to mill and returning meal, 15 miles,	15 00
Total, ...	$99 00
CR.—By 225 bushels oats, giving 18⅓ lbs. meal per bushel, 4125 lbs. meal, at 5 cents per lb., ...	$206 25
Cost of crop, ...	99 00
Leaving a profit of, ...	$107 25

The Russian oats spoken of, are said to be a variety particularly adapted to the rich soil of Aroostook. They do not grow as high as the common oat by ten or twelve inches; are fine-strawed, and seldom lodge so as to injure the grain; are two weeks earlier than the common oat, and are said to make the best meal of any variety.

EXTIRPATION OF GARLIC.—A subscriber at Cornwall, N. Y., wishes information in regard to the extirpation of the "wild onion," by which it is presumed is meant garlic, that being in several sections of the country, a troublesome plant. We have had no experience with it, and should be obliged for any remarks from those who have been successful in getting it out of their grounds.

Prices of Agricultural Products.

New-York, May 22, 1849.

FLOUR—Genesee, per bbl., $5.12½a$5.25. Western, $4 31a $4.44.

GRAIN—Wheat, per bush., Genesee, $1.22a$1.25—Ohio $1.03. Corn, Northern, 62c.—Southern, 55a59c. Rye, 58c. Oats, 33½a 31½c.

BUTTER—best, per lb., 19a20c.—western dairy, 10a14c.

CHEESE—per lb., 4a7c.

BEEF—Mess, per bbl., $11a$11.50—Prime, $8.50.

PORK—Mess, per bbl., $9 87a$9.94—Prime, $8.25.

LARD—per lb., 6½a7c.

HAMS—Smoked, per lb., 7a9½c.

HEMP—American dew-rotted, per ton, $155.

HOPS—new, per lb., 7½c.

COTTON—Upland and Florida, per lb., 6½a8c.—New Orleans and Alabama, 6½a8½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	36a38c.
" half blood do.,	31a33c.
" one-fourth blood and common,	29a30c.

REMARKS.—The demand for flour and meal is quite brisk. Grain is generally dull. For pork, the market is heavy—lard is in good demand. Cotton is firm with sales.

New Cheese Press.

DICK'S Patent Cheese Press, a new, more simple and complete cheese press, than ever before offered to the public. It needs but to be seen to be approved, and when known, will be adopted by nearly all large cheese dairymen. All are warranted.

For sale at the Albany Agricultural Warehouse.

Nos. 369 & 371 Broadway, Albany, N. Y.

HORACE L. EMERY.

☞ Price and descriptive catalogues, Gratis.

Haying and Harvesting Tools.

Grain Cradles.—Grant's, and Myers & Bryan's, both premium cradles.

Grass and Grain Scythes.—Dunn's and Troy, (premium scythes.)

Revolving Horse Rakes.—Wilcox and Downer's, " rakes.

Hand and Gleaning Rakes, of various makers.

Scythe Snaths.—Clapp's, Lamson's and others.

Sickles, Rifles, Scythe Stones, &c., &c.

Anti-friction Rollers and Cranks for Grindstones.

Grindstones hung complete for use.

Also, every Implement, Machine and Seed wanted by the farmer. All warranted. Constantly for sale at the Albany Agricultural Warehouse, Nos. 369 & 371 Broadway, Albany.

H. L. EMERY.

☞ Catalogues gratis on application by mail, &c.

Merino Sheep.

THE subscribers are now sending into the west—Ohio, Illinois, Michigan, &c.—some choice sheep from their respective flocks—pure blooded Merinos. Most of them are one and two years old this spring, and are the product of our merino ewes, purely bred, by the bucks of the importation of 1840 by Mr. Collins, and of the importations of Mr. Taintor of 1846, 1847, and 1848. We feel assured that these sheep will prove a valuable acquisition to the sheep masters and wool growers of the West. They are sheep of unquestionable merit. To prevent imposition—inasmuch as many worthless sheep are annually sold as coming from our flocks, we name our salesmen:—Messrs. S. B. ROCKWELL, JOHN CAMPBELL, SYDNEY BYINGTON, CHARLES TAYLOR and H JOHNSON—who will at any time show their commission over our own signatures. Any statements made by them may be relied on, and the public may have confidence in them as men of worth and character.

L. G. BINGHAM,
MERRILL BINGHAM.
A. L. BINGHAM.

Vermont, June 1, 1849.—1t.

A Virginia Farm

FOR SALE, within sixteen miles of Richmond, Va., containing 253 acres of superior land, well adapted to the culture of wheat, corn, oats and potatoes. The James River and Kanawha canal runs through the premises. The situation is truly splendid, viewing the surrounding country many miles. There is a very fine orchard of apple, pear, cherry and peach trees—many fine springs of superior water. The house has just been put in good repair. The outhouses are nearly all new, built in the best manner, and can accommodate 30 head of horses and cows. There are two churches, a post office, tavern add physician quite near. Also, a market for all kinds of fowls, meat and vegetables, within one-quarter of a mile from the farm. A saw and grist mill also in sight. One of the owners is going to California.

All information will be given, by applying, post paid, to

B. B. ALLEN, No. 19 Platt st., New-York.

June 1, 1849.—1t.*

NOW IN THE PRESS,

TO BE PUBLISHED ON THE FIRST OF AUGUST.

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain more than

TWO HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole will form a handsome duodecimo volume, at the low price of One Dollar. June 1, 1849.

Short-Horns at Auction.

THE subscriber being about disposing of 50 acres of his farm, for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one-half of his present herd,) at his farm, 2½ miles from this city, on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year old and three year old heifers and cows, and 11 young bulls, from 10 months to 2½ years old. Great care has been observed and considerable expense incurred, in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the New York State Ag. Society, and the N. Y. American Institute, attest the estimation in which it is held, wherever it has been exhibited for competition. About eight head of the above cattle, are part of a purchase made last May, of E. P. Prentice, Esq., of Albany, embracing all the Short Horns of that gentleman, and were the product of the four selected cows he retained at his public sale, and possessed much of the blood of the herd of Mr Whittaker, of England, from whom Mr. P. made importations of stock. The other portion of the young stock inherit much of the blood of the herd of T. Bates, Esq. of Yorkshire, Eng, from whom my importations have been made, being one and two crosses of the imported bull Duke of Wellington, and the premium bull Meteor. All the heifers of suitable age, are or will be in calf by these bulls.

For the information of Southern gentlemen, who may be desirous of introducing Durham stock in that region, and who may entertain an opiniinon, that that climate is not congenial to their successful propagation there, I submit the following extract of a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, January 25, 1849:

"The bull you sold Col. Hampton, of this State, gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 of his get, now in his yard. They are the most superb yearlings ever bred in the South, and your stock will not suffer from him." The pedigrees of the animals will be issued and circulated a month previous to day of sale. A liberal credit will be given—say 6 to 12 and 18 months, if desired The particulars will be given in the pedigree list. GEO. VAIL.

Troy, April 1, 1849.—3t.

Books for Rural Libraries.

THE following works are for sale at the office of THE CULTIVATOR, No. 407 Broadway, Albany:

American Agriculture, by R. L. Allen, $1.
—— Shepherd, by L. A. Morrell, $1
—— Poulterer's Companion, by C. N. Bement, $1.
—— Veterinarian, by S. W. Cole, 50 cents.
—— Herd Book, by L. F. Allen, $3.
—— Farmers' Encyclopedia, $3.
—— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
Domestic Animals, by R. L. Allen, 75 cents.
Dictionary of the Farm, by W. L. Rham, (English,) $2.
Domestic Economy, by Miss Beecher, $1.
Domestic Family Receipt Book, by Miss Beecher, 75 cents.
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruit Culturist, by J. J. Thomas, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50
Farmers' Companion, by Judge Buel, 75 cents.
Lanscape Gardening, by A. J. Downing, $3.50.

Farm for sale in Virginia.

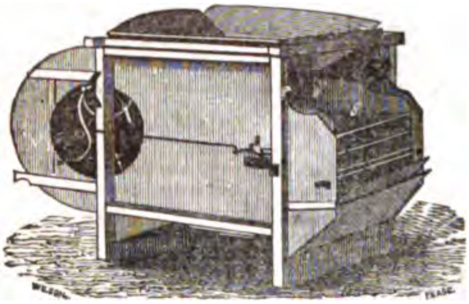
THE subscriber having resumed his former occupation in the city of Albany, offers for sale his farm, near Prospect Hill, Fairfax Co, Va. This farm is pleasantly situated within eight miles of the city of Washington, and six from Georgetown, on the main road leading from the Capitol to Fairfax Court House, in a healthy location, with a fine prospect of the surrounding region, and in an excellent neighborhood. It adjoins the plantation of Commodore Jones, and formed originally a part of his estate—is under good cultivation—and has on it a new and commodious two story house, finely siuated in a grove of forest trees. A good barn and stables, two good wells of water, and a thriving apple and peach orchard, with an abundance of quince trees, cherry trees, &c. There are eighty acres of land belonging to the farm, which is well fenced, and has an abundant supply of wood. To any person desirous of taking up his residence in Virginia, no more eligible situation could be offered. The premises will be sold on very liberal and accommodating terms.

Communications addressed to the subscriber, at the office of the Secretary of State, Albany, will meet with prompt attention.

Albany, June 1, 1849.—1t. S. S. RANDALL.

I. T. Grant & Co.'s

PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon. J. R. Poinsett, of South Carolina:—"The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—"Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.

The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T. GRANT & CO.
Junction P. O, Rens. Co., 8 miles north of Troy.
May 1, 1849.—5t. eom.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown tobe of a dangerous tendency These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle.
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. June 1.—3t.

Portable Self-Acting Cheese Press.

Patented August, 1847, by Chester Stone.

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the power; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Palmer's Wheat Drill.

IT is an established fact that the drill culture is far superior to any other, and the only safeguard from drouth or "*winter-killing*."

It is also a fact that J. A Holmes & Co., of Brockport, Monroe Co., N. Y., are manufacturing the best Wheat or Grain Drill in the known world, and at the lowest price. Every useful agricultural implement should be afforded at a rate that places it within the reach of every farmer.

To accomplish this, the subscribers have made an arrangement with the inventor, to manufacture on a large scale for the coming season,

PALMER'S WHEAT DRILL.

An article combining all the advantages of every other grain drill or planter, in a simple substantial form.

Confiding in the prospect of *Large Sales*, they have determined on selling them at a *very low profit*, making the price of the drill at least *twenty-five dollars cheaper* than any other, capable of performing as much.

☞ We challenge the world to produce a drill equal to it. ☜

They are made of first rate materials, and in a strong, workman-like manner, and finished in superior style. Each drill is WARRANTED.

Orders addressed to J. A. HOLMES & CO., Brockport, N. Y., will meet with prompt attention Orders should be sent in or delivered to our authorised agents as early as the month of July, to secure a machine this year.

Brockport, May 1, 1849.—2t. J. A. HOLMES & CO.

Morgan Horse Black-Hawk.

THIS well-known and popular stallion will stand this season, at the stable of the subscribers; terms. $15 the season, payable in cash, or a satisfactory note on demand with interest. For particulars in regard to pedigree and performances, see large bills, and previous volumes of *The Cultivator*. D. & D. E. HILL.

Bridport, Vt., May 1, 1849.—3t.

The old Morgan Gifford,

THE highest blooded Morgan Stallion now remaining, will stand this season at the stable of F. A. Wier, in Walpole, N. H.

Terms $25, $5 of which to be paid at the time of service, and the remaining $20 if the mare proves in foal.

Pasturage furnished as usual.

FRED. A. WIER, Agent for the Proprietors.

March 1, 1849.—5t.*

The Genuine Morgan Horse

GENERAL GIFFORD, will stand the ensuing season, on Mondays and Tuesdays, at the stable of Geo. A. Mason, 2½ miles north-east of Jordan; Wednesdays, Thursdays and Fridays at the stable of D. A. Munro, in Camillus; on Saturdays, at the stable of John C. Munro, in Bellisle.

Terms, $10 to insure. Mares that are not placed directly in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers, at 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and style of action, General Gifford more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits.

General Gifford was got by the Gifford Morgan, his dam a Morgan mare. A full description of the origin of the Morgans, and the pedigree of Gifford Morgan, may be found in the Cultivator for 1846, p. 19 MUNRO & MASON.

April 1, 1849.—3t.

Morse's Grey.

THIS celebrated horse will stand the ensuing season at the stable of JAMES RICE, in Spiegletown, three miles north of the village of Lansingburgh. He is a beautiful dapple grey, 15¾ hands high, strongly and finely proportioned; has trotted his mile in 2 minutes and 50 seconds; is a square trotter, and combines first-rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper, are engerly sought after in the market, and command prices varying from $150 to $500.

The very high reputation of his stock as road horses, and the extraordinary prices they command, render him by far the most profitable horse to breed from of any in the country.

Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner, Mr. CALVIN MORSE.

Terms, $10 the season. Insurance to be agreed upon.

Communications addressed I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

May 1, 1849.—3t.

The Imported Horse Consternation

WAS bred by Mathew Hornsey, Esq., of Stitenham, Yorkshire, England, in the year 1841. He was imported by C. T. Abbot, Esq., in the year 1845. He is now owned by J. B. Burnet, Esq., of Syracuse, N. Y., and will serve a limited number of mares the ensuing season, at his own stables, near the village of Geddes, two miles west of Syracuse. The very best pastures, with plenty of water and the most secure fences, will be provided for mares sent from a distance, at two shillings and six pence a week. No mare taken except at the risk of the owner.

Consternation is of a beautiful, unfading dapple brown color—stands 15 hands and 3 inches high, and is remarkable for vigor of constitution, uncommon development of bone and muscle, and an intelligent kind docile position He is compact and short-legged, yet of a rangey and majestic figure. His chest and flank are remarkably full and deep. His action is easy and graceful, yet proud and commanding.

But what is more important perhaps than either, he is entirely thorough-bred. There is no taint of mongrel stock in his long line of ancestry. Indeed there is no horse living, with a more distinguished or genuine pedigree.

His ancestors were of unusual size and strength, and every one of them of good disposition and free from blemishes. His pedigree is briefly as follows, viz:

By Confederate—dam Curiosity, by Figaro—her dam by Waxy; Confederate was bred by Earl Fitz William, got by Comus—by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

This pedigree is in every particular true and genuine, and can be abundantly established by reference to certificates and volumes of the Stud Book in the possession of the subscriber.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Oneida Castle; Henry Rhodes, Trenton; A. Ford or John Best, Romo, and to farmers generally in that vicinity.

Terms $5 in advance, and $5 additional if the mare is got in foal. April 1.—3t. J. B. BURNET.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

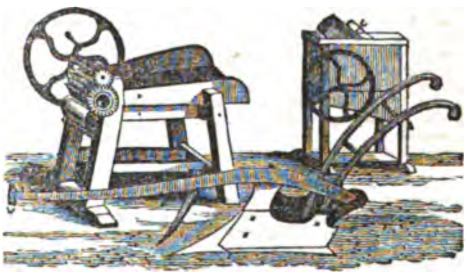
37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



John Mayher & Co.

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York* City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

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Wheeler's Patent Horse Power and Threshing Machines.

HAVING increased facilities for the manufacturing of the above Machines in this city, the public can be supplied with them at short notice, at wholesale and retail.

To those farmers who wish the machines to sell, and will put them running in their vicinities, a fair discount will be allowed.

For terms, and conditions of sale, and warranty, see the Albany Cultivator, Genesee Farmer, Prairie Farmer, and American Agriculturist; also, catalogues and circulars of the Albany Agricultural Warehouse and Seed Store.

These machines are acknowledged superior by all who have used them, and having been extensively used since 1841, are known to be durable—and are much improved in several respects.

The cost of threshing with these machines, has been variously estimated at from one-half to one-third that with the ordinary sweep powers.

Annexed is a statement of expenses of operating a two horse machine, compared with the ordinary kind—as given by an extensive farmer in Illinois, the past season:

Five men in threshing time to thresh and clean, averaging 200 bushels per day for market,	$5 00
Two horses,	1 00
Boarding 5 men and two horses, at 3s.,	2 63
	$8 63

Amounting to a little over 4½ cts. per bushel—while he was enabled at all times to take advantages of prices, seasons, &c., and to do his work without being dependant upon others for labor or machines.

While his expenses, when he hired machines were never less than the following:

For threshing 250 bushels per day, at 5 cents,	$12 50
Furnishing four horses of six, (2 belonging to machine,)	2 00
Six men, (beside two with machine,)	6 00
Boarding all hands and horses,	5 25
	$25 75

Amounting to about 10½ cents per bushel. And if to this be added the average loss by imperfect threshing and separation of grain from straw, more than with Wheeler's Thresher and Seperator of not less than five per cent of grain at one dollar per bushel, would amount to nearly 15½ cents per bushel, or more than three times the expense with Wheeler's machine. To say nothing of the delays and losses consequent upon depending upon others, &c.

The foregoing is but a fair statement of the expenses of the majority of grain-growing farmers for threshing; and where labor and grain are valuable, these savings are well worth counting.

All orders and communications are solicited, and will receive prompt attention. HORACE L. EMERY.

June 1. No. 369 & 371 Broadway, Albany, N. Y.

THE HORTICULTURIST,
AND
Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE FOURTH VOLUME OF THE HORTICULTURIST commences on the first of July, 1849.

The Publisher, at the close of the third volume, desires to return thanks for the patronage bestowed on this work. It has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. Its influence on the progress of Gardening, and the information in matters of Rural Taste, is already strikingly apparent. Its extended and valuable correspondence, presents the experience of a large body of the most intelligent cultivators in America; and the instructive and agreeable articles from the pen of the Editor, make it equally sought after by even the general reader, interested in country life.

The work is published monthly, in 8vo. form of 48 pages—each number accompanied by a frontispiece and several other engravings. The list of constant contributors embraces our first horticulturists and practical cultivators. The "FOREIGN NOTICES" present a summary of all the leading horticultural Journals of Europe; the "DOMESTIC NOTICES," and "ANSWERS TO CORRESPONDENTS," furnish copious hints to the novice in practical culture; and the numerous and beautiful illustrations—Plans for Cottages, Green-Houses, the Figures of New Fruits, shrubs and plants, combine to render this one of the cheapest and most valuable works to country gentlemen on either side of the Atlantic.

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

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☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Kinderhook Wool Depot.

THE success of this enterprize, and the steady increase of business during the past 4 years, has induced the subscriber to associate with him Mr. Thomas M. Burt, as a partner in the business. The integrity and correct business habits of this gentleman, are well known to many prominent men throughout the State; and for more particular information, reference may be made to R. H. King, Esq., or John T. Norton, Esq., of Albany.

With increased facilities for extending their business, the enterprise will be conducted on the same principles as heretofore:

1. The FLEECES will be thrown into sorts according to *style* and *quality*.
2. A discrimination will be made between wool in good or bad condition.
3. All who desire it can have their *clips kept separate*.
4. Sales will be made invariably for cash.
5. The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25 cents on $100 for a term of three months.
6. Liberal advances made in cash, on the usual terms.

Wool forwarded from the West and North, should be marked H. B. & Co., Kinderhook, N. Y., with the initials of the owner's name on each sack, and shipped to East Albany.

Kinderhook, May 18, 1849. H. BLANCHARD.

After the 1st of June, the business will be conducted under the name and firm of H. BLANCHARD & Co.

Reference may be had to,
Dr. J. P. Beekman, Kinderhook, N. Y.
Benj. P. Johnson, Albany, "
L. A. Morrell, Lake Ridge, "
D. S. Curtis, Canaan, "
C. W. Hull, New-Lebanon, "
J. Murdock, Wheatland, "
C. W. Richmond, Aurora, "
Nathaniel Sawyer, Cincinnati, O.
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Freeland, Stuart & Co., New-York City.
R. Carter, Chicago, Illinois.

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☞ All subscriptions to commence with the volume, (the Jan. No.,) and to be PAID IN ADVANCE.

☞ All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

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ADVERTISEMENTS—The charge for advertisements is $1, for 12 lines, for each insertion. No variation made from these terms.

H. K. Palmer

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, JULY, 1849. VOL. VI.—NO. 7.

Improvement of the Soil.

Improvement of Old Lands by Green Manuring.

EDITORS OF THE CULTIVATOR—Eight years ago, I tried the experiment of renovating a worn-out pasture-field by Green-Manuring, or, the plowing in of Green Crops. The highly satisfactory results of this experiment, and the general subject of improvements by this system of manuring, were so freshly brought to mind yesterday, in strolling over my field, that I now give you my experience, together with a brief collection of facts and principles touching the matter, from other sources.

The field which I experimented upon contains four acres; it is a light, thin, sandy loam, and is situated upon a high swell, over a mile from the barn, and difficult of access with a manure cart. It had been exhausted of all fertility by successive and injudicious croppings with rye, before it came under my management. A thin herbage, of little or no value, would show itself in the spring, only to be followed by a brown and most arid appearance at mid-summer. For two or three years, I occasionally passed over this land, thinking that the next season should witness some exploit for its renovation; but the great difficulty that continually presented itself to my mind, was, how to commence an improvement where there was no possibility of carting on any fertilizing substance, at a reasonable expense. I finally decided upon the following course:

In the latter part of June, when the little vegetation which the land produced was at its greatest height, it was nicely turned under, and the field rolled. I was quite sure, to start with, that the usual depth of plowing, namely, three to four inches, by which the skinning process is made finally complete, or receives its full finish, had been the practice here; and I therefore put the plow in to the depth of six inches, in order to expose a surface that had never before seen the day, which was thought to be of better quality than the first four inches. At any rate, it could not be poorer. Three pecks of buckwheat to the acre, were sown upon the rolled surface, and harrowed in. The crop was permitted to ripen, and gave an average yield of eight bushels per acre. As I had laid a plan of operations which were to extend through more than one season, and as I wished to test the merits of green manuring, I concluded to take off whatever of a scanty crop the land would naturally produce, in order to compare it with another crop, to be harvested at the end of the course. Otherwise, I should not have taxed this poor old pasture with a grain-crop, at all.

In May following, one bushel of buckwheat was sown on each acre, and when the crop had attained its blossom, it was turned under. A heavy chain, with one end attached to the plow-beam, immediately forward of the mould-board, and the other to the off-end of the evener, lopped down the tender buckwheat stalks, so that the plow covered them up pretty well. The field was then rolled; the same quantity of buckwheat again sown, and the crop managed precisely like the preceding one. Late in September, one and a-half bushel of winter rye was sown to the acre. The following spring, the rye presented a remarkable appearance. It stood so thick and heavy upon the ground that it required some resolution to plow it under, especially when all outsiders were pronouncing it an improvident and injudicious procedure. The rye was turned under. On the 20th of June, one bushel of buckwheat was again sown on each acre, together with grass seeds. It is risky sowing grass-seed at such a season of the year; but it was wet weather at the time, and we had a sufficient succession of showers through the summer to insure a good 'catch' of grass. This crop ripened, and gave an average yield of 18 bushels per acre,—being an increase of over 100 per cent. over the first crop. It is entirely safe to say, that one-half an acre has produced more value in feed since, than the four acres did previous to plowing in the green crops. I shall never be at a loss to know what to do with similar fields hereafter.

A number of interesting communications upon the subject of green crops for manure, have been published in our Agricultural Journals. With your permission, I will cite the following interesting facts from two of them:

In the 9th vol., *N. E. Farmer*, W. Buckminster, Esq., of Framingham, Mass., states that in May, 1828, he plowed up three and a-half acres of poor pasture. It had been so reduced by a former owner, that 10 acres did not afford sufficient pasturage for one cow through the season. Immediately after plowing, a bushel of buckwheat to the acre was sown, and in six weeks, the crop was rolled down in the direction he intended to plow, and then turned under, and the field sowed as before. In the latter part of August, the second crop was served like the first, and the land then seeded to clover, herds-grass and red-top. The next season, the field was mowed, and although the grass was considerably winter-killed, it yielded a ton of hay to the acre. The field was afterwards pastured; and he never had any pasture-ground yield so well before. He thought the green crops improved the land as much as a good dressing of manure.

In the 12th vol., *N. E. Farmer*, John Keely, of Haverill, Mass., gives an account of remarkable crops of rye, which he had raised by the use of green crops for fertilising the soil. The land on which the experiments were made, is situated on the Merrimack river; the soil a sand, approaching to loam as it recedes from the river. It is altogether too light for grass. The crops found most profitable to raise on it, were winter rye, and Indian corn;—the crops of rye ordinarily yielding 8 to 12 bushels, and of corn, 13 to 30 bushels, to the acre.

The land on which he raised a premium crop of rye, in the season of 1832, had, for three or four years previous, been planted to corn; and owing to the extent of his tillage land, had not received more than four or five loads of manure to the acre, each season. The weed commonly called charlick, (charlock?)—which very much infested the land,—was suffered to attain a rank growth in the spring of 1831, and about the 20th of June it was plowed in. Another crop sprung up and covered the ground, and in August, that was plowed in also. A third crop soon appeared, which, in the latter part of September, was served like the others. At this time the rye was sown in the usual manner, namely, a narrow strip of land was plowed, the seed sown immediately upon the furrows, and harrowed in, and so on, until the whole was completed. Sowing the seed immediately after the plow, was considered very advantageous to the crop. The soil then being moist, caused the seed to spring immediately, and gave a forwardness and vigor to the plants, which they ever after maintained. The next year, 1832, the rye was harvested at the usual season. The land contained one acre and thirteen rods, and yielded forty-six bushels and three pecks. A field of four acres, similarly managed in 1828, gave 33¼ bushels of rye to the acre.

Mr. Keely remarked that experience and close observation upon the management of green crops, had convinced him that three things, among others that might be more obvious, were essential to a successful result: First, the absolute necessity that the plow used be of good construction: . Second, that some method be devised to prostrate the crop before the plow, or it would not be covered:—He used a wooden roller, about four inches in diameter, and sixteen inches long, fixed on the end of the plow beam, in a frame temporarily put on for the purpose.—Third, it had been found necessary to plow the land soon after a rain,—this was very light, sandy land,—while it is moist, or the plow would crowd the furrow, instead of turning it handsomely. He also considered it advantageous to roll the land, after each plowing.

The principles by which lands are improved by turning in green crops, are clearly set forth by Prof. Johnston, in his usually happy way. I cannot resist an inclination to quote briefly from his lectures:—

"The plowing in of green vegetables on the spot where they have grown, may be followed as a method of manuring and enriching *all* land—where other manures are less abundant. Growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation—and retain them in their leaves and stems. By plowing in the whole plant, we restore to the surface what had previously sunk to a greater or less depth, and thus make it more fertile than it was before the green crop was sown.

"This manuring is performed with the least loss by the use of vegetables in the green state. By allowing them to decay in the open air, there is a loss both of organic and of inorganic matter—if they be converted into fermented (farm-yard) manure, there is a large loss, and the same is the case if they are employed in feeding stock,* with a view to their conversion into manure. *In no other form can the same crop convey to the soil an equal amount of enriching matter as in that of green leaves and stems.* Where the *first* object, therefore, in the farmer's practice is, so to use his crops as to enrich his land—he will soonest effect it by plowing them in in the green state.

"But it is deserving of separate consideration, that green manuring is especially adapted for improving and enriching soils which are poor in vegetable matter. The principles on which living plants draw a part—sometimes a large part—of their sustenance from the air, have been discussed, and I may presume that you sufficiently understand the principles, and admit the fact. Living plants, then, contain in their substance not only all they have drawn up from the soil, but also a great part of what they have drawn from the air. Plow in these living plants, and you necessarily add to the soil more than was taken from it—in other words, you make it richer in *organic* matter. Repeat the process with a second crop, and it becomes richer still—and it would be difficult to define the limit beyond which the process could no further be carried."

I would never depend upon green manuring alone, on land that I intended to tax with grain crops. In such a case, some additional saline substances would need to be added, which this system of manuring could not supply, in order to support those crops and maintain the fertility of the soil. The possession of light and poor, sandy or gravelly lands, is usually attended with limited means for making or *purchasing* manure; and these soils are always materially deficient in vegetable matter. It has therefore been my impression, for years, that, were I to become the owner of such a farm, I should use green crops extensively, in connection with other manuring, to invigorate my poor soil, and supply it speedily with this essential material—vegetable matter.

In the case of worn and exhausted pastures,—such as the one I have described,—which are level enough to plow, and where a good portion of the droppings of the cattle remain on the land, a resort to green manuring will doubtless increase and perpetuate their fertility. In my immediate vicinity, pasturage is worth from 45 to 50 cents a week for each cow. If my pasture ranges were five or ten times larger than they are, I could readily obtain these prices. With me then, a considerable outlay for increasing the productiveness of these lands is judicious. In other sections, where the various conditions I have named are all right, I would confidently recommend the practice of *turning in green crops*, as a cheap, effectual and speedy method for increasing the productiveness and profit of worn-out pastures. F. Holbrook. *Brattleboro', Vt., May*, 1849.

Action of Lime.

Chemical investigation has led to the idea that one of the effects of lime, when applied to the soil, consists in its rendering soluble certain mineral substances which are essential to the growth and perfection of vegetation. Granite, trap, and slate contain potash, which is liberated by caustic lime. There is good reason to believe that this action of lime is of great importance, and that in many instances, it is one of the principal causes of the increased productiveness, which the application of this substance imparts to the soil. The following remarks, from a valuable paper by Prof. Johnston, serve eminently to illustrate this subject, and will be read with profit.—Eds.

The decaying vegetable matter in the stems, roots, and leaves of plants, which form the so-called humus of the soil, contain a large proportion of the inorganic matter which was necessary to their existence in the living state. As they decompose, this inorganic matter is liberated. By promoting this decomposion, therefore, lime sets free this mineral matter, and provides at once abundant organic and inorganic food to the growing plant. The result of the action of lime is no less important in reference to its fertilising quality than that by which it causes the production of those numerous changes in the purely organic matter of the soil to which I have already adverted.

If the vegetable matter decay rapidly, it will supply in abundance all the materials, both organic and inorganic, which new races of plants require to form their entire substance. If it be in an inert state, or decompose slowly, the food it contains remains locked up and comparatively useless to vegetation. In quickening the decay of this inert or slowly decomposing matter, it is easy to see, therefore, how lime should render the land more fertile, and should do so more sensibly where vegetable matter is more abundant.

---

* The manure voided by an animal contains very much less solid matter than the food it has consumed. For every 100 lbs. of dry fodder, the horse or the cow will give on an average, 46 lbs. *of dry* manure. Lec. 18, Sec. 13.

The mineral and rocky fragments in the soil are acted upon in a similar manner.

Among the earthy constituents of soils, there often exists fragments of feldspar and other minerals, derived from the granitic and trap rocks, as well as portions of the slaty and other beds from which the soils have been formed, and which, as they crumble down, yield more and more of those inorganic substances on which plants live.

The decomposition of these minerals and rocks proceed more or less rapidly under the conjoined action of the oxygen, the carbonic acid and the moisture of the atmosphere. But the presence of lime promotes this decomposition, and the consequent liberation of the inorganic substances which the rocks contain.

The silicates of potash and soda are among the most important compounds which these minerals and rocky fragments contain. These silicates, after being heated to redness with quick-lime, readily yield a portion of their potash or soda to water poured upon the mixture. The same result follows, but more slowly, when without being heated, the silicates and the lime are mixed together into a paste with water, and left for a length of time at the ordinary temperature of the atmosphere. It is reasonable, therefore, to suppose that, in the soil of our fields, a similar decomposition will slowly take place when quick lime is mixed with it. It will take place, also, though still more slowly, when lime is added to it in the form of carbonate.

By some, the liberation of potash and soda in this way is supposed to be the most important action exercised by lime in rendering the land more productive. With this extreme opinion I do not agree, though it must be conceded, I think, that in numerous instances a certain amount of benefit must follow from the chemical action it is thus fitted to exercise.

I have spoken of lime as liberating the inorganic constituents of the decaying vegetable matter of the soil. The stalks of the grasses, and the straw of our corn-bearing plants also contain silicates of potash and soda, which lime sets free in hastening the decomposisition of the vegetable matter of which they form a part. Besides liberating, it further decomposes these silicates, as it does those of the minerals in the soil, and sets their potash and soda free to perform those important functions they are known to exercise in reference to the growth of plants. I am inclined to consider this part of the action of lime as of nearly equal importance to vegetation in many instances, with that which it exercises upon the mineral silicates.

While the potash or soda is set free in a soluble state, the lime unites with a portion of silica, forming a silicate of lime of which traces are to be met with in nearly all soils. This silicate, again, is slowly decomposed by the agency of the carbonic acid of the atmosphere and of the soil, as I have already explained when speaking of this compound as one of the causes of the known fertility of soils formed from the decay of trap rocks.

Potash and soda exist sometimes in considerable quantity, in our stiff clay soils, in combination with the silica and alumina, of which they chiefly consist. From their extreme tenacity, the air is in a great measure excluded from these soils, and hence chemical decomposition proceeds in them very slowly. The addition of lime alters their physical character, and, by making them more open, admits the air, and thus promotes its decomposing action upon them. But it acts chemically also, in the same way as it does upon the silicates already spoken of, and thus compels them to give up more freely to the roots of plants those mineral substances by which their growth is to be made more luxuriant.

ACTION OF LIME ON SALTS OF IRON, MAGNESIA AND ALUMINA.—*Salts of Iron.*—Lime, either in the mild or in the caustic state, possesses the property of decomposing the sulphate and other saline compounds of iron, which especially abound in moorish and peaty soils, and in many localities so saturate the subsoil, as to make it destructive to the roots of plants. Sprengel mentions a case in which the first year's clover always grew well, while in the second year it always died away. This, upon examination, was found to be owing to the ferruginous nature of the subsoil, which caused the death of the plants as soon as the roots began to enter into it.

When land is rendered unproductive by the presence of salts of iron, a dressing with lime will bring the land into a wholesome state without other aid than those of the drain and the subsoil plow. If sulphate of iron be the cause of the evil. the lime will combine with the acid and form gypsum, (sulphate of lime,) while the *first* oxide of iron which is set free will, by exposure to the air, be converted into the *second* or red oxide, in which state this metal is no longer hurtful to vegetation.

The drain and the subsoil plow are useful auxiliaries to the lime in lessening the injurious effects of the compounds of iron, because they allow the rains to descend and gradually to wash away the noxious matter which has accumulated in the under soil—because they permit the descending water to carry with it portions of the lime in a state of solution, and thus to spread its good effects through the whole soil—and because they admit successive supplies of air as deep as the bottom of the drains, by which, while the action of the lime is promoted, those other good effects also are produced which the oxygen of the atmosphere can alone accomplish. In fact, unless an outlet for the surface water be thus provided beneath, by which the lime may be enabled to descend, and the rains to wash away slowly the noxious substances from the subsoil, even the addition of a copious dose of lime will only produce a temporary improvement.

Salts of magnesia and alumina.—Lime decomposes also the sulphates of magnesia and alumina, both of which, but especially the former, are occasionally found in the soil in too large proportions, and, being very soluble salts, are liable to be taken up by the roots in such quantity as to be hurtful to growing plants. With the sulphuric acid of these salts the lime forms gypsum, as it does with the acid of sulphate of iron when this salt is present in a soil to which it is added: besides removing the evil effects of these very soluble sulphates, therefore, it exercises the beneficial action which gypsum is known to exhibit upon many of our cultivated crops.

Alumina has the property of combining readily with many vegetable acids, and in the clay soils exercises a constant influence—though more feeble in degree than that of lime—in persuading organic matter to those forms of decay in which acid compounds are more abundantly produced. Hence, clay soils almost always contain a portion of alumina in combination with organic matter. These organic compounds are decomposed by lime, and, by the more energetic action of this substance, their constituents are sooner made available to the wants of the new races of plants.

Charcoal and Peat.

Whatever opinions may have been formed in relation to plants supplying themselves sufficiently with carbon and nitrogen from the atmosphere, we think careful observation has shown that the application of carbonaceous and ammoniacal substances is beneficial to the growth of plants; and to this conclusion we believe the public mind will come at last. It is admitted by all, that plants feed on carbon and nitrogen; and why should we not supply them with their appropriate food?

Indeed, it is but a few years since the virtues of charcoal as a manure, and as a medium of *catching* ammonia, were much vaunted by some of those who now consider it of little or no value; they even went so far as to declare, that it was, of all others, "the cheapest and best manure" for this country.

Although the writer of this never indulged a belief in the wonderful properties of charcoal, as put forth by some enthusiastic and sanguine theorists, he has never doubted its actual value. He was convinced of this before he had ever seen any theory on the subject derived from chemical investigation. He had seen the effects of the substance on different crops; he had seen the yield of Indian corn increased ten bushels to the acre, simply by putting a shovel-full of coal dust from the beds of coal-pits, in each hill. He had seen a similar effect from its use on potatoes; the difference in both crops, between the charcoal dust and nothing, could be seen to a row or a hill, during the whole period of growth. Effects equally marked, were seen from the spreading of coal dust on moist grass land; the application of about three hundred bushels to the acre, having increased the quantity fifty per cent., and greatly improved its quality. The beds of old coal pits, which had been made more than twenty years, were found to produce a sward so much thicker and luxuriant than the surrounding ground, as to attract attention at a considerable distance, and the herbage was so much sweeter that these spots were more closely grazed by stock. The same superiority of these spots over the rest of the field, was seen when the land was plowed and put to any kind of grain; the straw was brighter, thicker on the ground, and the grain generally heavier.

But it may be said that the good effects in the cases above cited, were owing to the ashes or alkalies, produced in burning the coal, and the action of heat on the earth. To this it may be replied that spots of ground where heaps of wood had been burned and the ashes spread around, soon ceased to produce crops of extra yield; and while those on which coal dust had been spread, produced rich harvests, the former were covered with moss.

Nearly the same effects have been produced by the use of fine charcoal, from iron works and other places where quantities of coal had been gathered.

It is proper to say that the greatest benefits we have seen from the use of charcoal, have generally been on rather moist land. On very dry soils, we have seldom seen so favorable effects, except in moist seasons. Considerable moisture is evidently necessary to reduce the coal to a soluble state.

Some have supposed that charcoal acted wholly as an absorbent of ammonia. We are far from denying its effect in this particular, though we see no reason to believe that this is its only use as a manure. We do not see why it may not, as well as other carbonaceous matters, furnish carbonic acid to plants. Its decomposition is slow; but under the action of air and moisture it gradually wastes away; it is *dissolved*, and chemists assure us that charcoal, dissolved and combined with oxygen, forms carbonic acid, which plants are known to feed upon.

Peat or "muck" is similar in composition to charcoal, but is more easily decomposed. When muck is applied to the soil, it is evidently dissipated with every crop that is taken, and finally disappears entirely. It is so with charcoal, only the decay is slower.

The expediency of using charcoal as a fertilizer, must of course, depend on circumstances. Like other valuable substances, it may be "bought too dear;" and its cost in many situations is probably too great to admit of its profitable use as an ordinary manure. But charcoal *waste* may frequently be had at a cheap rate; and peat, which we have before remarked, is similar in composition, is abundant and cheap in many situations.

These substances are the best the farmer can use in his yards or stables for the absorption of urine, and the liquids of the manure heap, or for preventing the escape of gases. They hold the fertilizing principles with sufficient tenacity to prevent their loss by evaporation, but yield them, under the action of heat and moisture, to the wants of growing plants.

Peat has, in some instances been charred, and in that form used as a manure with advantage. Further experiments are needed, however, to show its comparative effects in this form. It can be charred without any additional expense for fuel; the peat itself, being once ignited, will burn to any degree that is required. The peat should be first partially dried then a fire may be kindled, and the lumps of peat gradually placed round. When the fire is fairly started, it should be kept in a smothered state; because an open blazing fire will reduce the peat to ashes, without forming charcoal. Two hundred to three hundred bushels of charred peat per acre, have been found to produce effects equal to a copious dressing of animal manure. The acid of the peat is dissipated by this process,—it is reduced to a pulverised state, and benefits vegetation immediately.

Management of Grass Land.

The improvement of grass land, has not generally received that attention in this country, which the importance of this department of husbandry seems to demand. Throughout the northern states, the grass crop, in hay and pasturage, is of greater value than any other. With the exception of swine, grass constitutes the principal food of our domestic stock. It chiefly *feeds* our laboring animals, and is the "raw *material*" from which is produced most of our beef, *mutton, butter*, cheese and wool; and by thus supporting the live stock of our farms, furnishes in an essential degree, the elements for the production of our breadstuffs, fruits and vegetables.

In those parts of our country where dairying and stock raising constitute the leading branches of farming, it is important to continue the production *of grass* on the same land as long as good crops can be obtained. In many situations, the product may be kept up for many years, with no diminution, without breaking the sod with the plow. Such is particularly the case with lands which are annually flooded, and it is so to a greater or less extent, with all rich, moist lands. The first requisite is, that the ground be properly prepared and well seeded. If intended for mowing, the surface should be made smooth. Wet places, and those where the grass would be likely to "winter-kill," should be underdrained. For *permanent* meadows, it is not advisable to sow much red clover; it dies out and leaves vacancies in the sward, which afford beds for the growth of weeds. The best grasses for the purpose under consideration, are timothy, (herds-grass of New England,) and red-top, with a little white clover—unless there is plenty of the latter in the soil. The quantity of seed to the acre, if the land is moist, may be ten quarts timothy. one bushel red-top, and two quarts of white clover. The different seeds may be mixed and sown together, slightly brushing or harrowing them in.

The time of seeding may be varied, according to circumstances. If the ground is in good order, the grass may be sown in the spring with some kind of grain; if it is in a rough state, the seeding may be postponed till August or September, which will give the best of the season to work it and bring it into suitable condition. When the ground has become well swarded, the great object will be to keep it so. Attention should be given that it does not become so closely bound as to choke the growth of the grasses; and if spots die out, from any cause, they should be immediately re-seeded. A light sharp harrow, drawn over the field in spring, after the ground has settled, will prevent binding. If the grasses seem to be generally on the decline, it will be best to give the sward a thorough harrowing, immediately after mowing, and sow seed, more or less, according to the condition of the old grass, applying at the same time, a dressing of fine compost. Brush in the seed and mix it with the manure with a brush harrow, and pass a roller over it. Top-dressings of this kind will be useful, and should be applied whenever the crop begins to depreciate.

Another mode of renewing meadows has been considerably practiced in Massachusetts and other New England states, for the last twenty years, and is much approved where it is wished to keep the land constantly in grass, with no other crop intervening. The land is plowed soon after the hay is taken off, and immediately re-seeded. The furrows are turned *flat*, in order to keep the surface as level and smooth as possible. The furrows are first rolled and then harrowed with a very light harrow, so as not to disturb the inverted grass—the roller and harrow being passed lengthwise of the furrows, only. Manure, in such quantities as the farmer can spare, is spread on the ground at the time of sowing the seed. It is not considered expedient to plow very deep, for this purpose; the new grass forms a good sward sooner, where the furrow is not more than five or six inches, than where it is of a greater depth. No grain is sown with the grass seed. If the autumn is moist, the young grass will make sufficient growth to stand the winter, and will give a good crop the next season, though it will be later than ordinary grass.

Many farmers who have had experience in sowing grass seed at various seasons of the year, prefer the latter part of summer or the first of autumn. Grass sown in spring, with grain, is often overpowered and kept feeble. It is choked and deprived of moisture by the stronger growth of the grain; and if the weather is dry and hot at the time the grain is harvested, a large portion of the grass is sure to be killed, which leaves the ground to be occupied by weeds. On the other hand, late-sown grass escapes the drouth of the first season, and by having the benefit of the autumnal rains, becomes well set before winter shuts up the ground.

The time of mowing has much to do with the vigor of the sward and the amount of the crop. If the grass is suffered to run to seed, it exhausts the energy and life of the roots, much more than if it was cut at an earlier stage. The deterioration of the soil is also greater in all cases where plants are allowed to form seed. The question has been much discussed, whether mowing-grounds should be grazed by any kind of stock. The writer's observation leads to the belief that this depends much on the condition of the land and the kind of animals placed on it. Cattle and horses may do great injury to grass land, when it is wet or so soft that the sward is broken and the soil poached by the hoof. Sheep are less liable to do damage in this way; though they, as well as other stock, may be kept so close that they will gnaw the grass to the roots, rendering it liable to be killed by frost or drouth; but if the land is only moderately fed, while it is dry and comparatively solid, we do not think the crops of succeeding years are lessened in consequence.

But it is argued that the aftermath should be left on the ground as a manure. The question is, simply, whether this grass is worth more for the purpose of fattening animals, or making butter and cheese, &c., than it is for manure in its crude state; or whether it may not be better economy to use the grass for these purposes, and manure the land in some other way. The course of the farmer must be determined by the particular circumstances in which he is placed; such as the comparative value of the products named, and the facilities he has for manuring his land. An experiment, however, will convince him that a dressing of manure, though it be only slight, will produce striking effects compared with the decay of any common crop of aftermath.

Pastures.—In most sections, it is common for land to remain for many years in pasturage. In hilly and mountainous districts, particularly, there are lands that have been thus in grass ever since they were first cleared from the forest—a period extending in some instances in this country, to two hundred years, and in Europe, some lands have been in this situation from time immemorial. Under proper management, the herbage does not deteriorate either in quantity or quality. In this respect, grass seems to form an exception to most crops, which require to be managed on the principle of rotation.

In many situations, little or no attention is paid to the improvement of pastures; a fact which may well excite surprise when we consider the important relation they sustain in the general economy of the farm. We know of no reason why a judicious expenditure of money on this part of the farm, may not yield as profitable returns, as the same amount laid out on any other portion. The chief improvements required on pastures, are draining, the eradication of bushes and useless plants, and bringing the land into proper grasses. Drainage is, perhaps, generally most necessary. The watery and sour nature of herbage consequent on too much wetness of the soil, is not only unpalatable and innutritious, but absolutely unwholesome, tending to produce diseases of the liver both in cattle and sheep.

Drains may be made at any season of the year, (except when the ground is frozen,) as best suits the convenience of the farmer. Bushes can be destroyed most easily towards the latter part of summer. The "old of the moon in August," has long been considered the best season for performing this business. Without admitting any special lunar influence in the case, we believe experience has established the fact that bushes are more effectually killed when cut at this period, than at any other. Alders and other shrubs that grow on stools or hillocks, raised above the general surface, may be torn out by the roots and effectually exterminated. Two men, and two to four strong oxen, with a root-puller, (such as has been several times described in our columns,) will clear them out rapidly. Briars and small shrubs should be cut close to the ground, and if they sprout, the operation should be repeated the next season, which, if the work is well done, will be pretty sure to destroy them. Sheep and cattle will kill many of the young sprouts by cropping them. The bushes should be burned, if thick on the ground, the ground well harrowed, and grass seed sown.

If ground is intended for permanent pasture, we think it is not necessary, or advisable, to plow it. The condition of the soil when the forest is first cleared off, is favorable to the growth of grass. The vegetable matter on the surface can be sufficiently mixed with the soil with the harrow, and the grasses *take* more readily and are less liable to die out, than if the soil was reversed by the plow.

Grasses for Pastures.—If we examine the sward of our best pastures, we shall generally find it to consist of several kinds of grasses and plants. The advantage of this mixture is two-fold; the ground is made to support a greater crop of herbage, and the thrift of stock is generally promoted by it. Animals when left to themselves, choose plants of different kinds, and we cannot doubt that nature prompts them to that course most conducive to their health.

It is a common remark with grazing farmers, and dairymen, that stock does best, and the best butter is made on the "natural grasses," meaning such plants as come into the soil without being sown. These are generally, the "June grass," or Kentucky blue grass, (*Poa pratensis*,) and white clover, (*Trifolium repens*.) Whether either of these is really indigenous to the country, we are unable to determine; but both are very *natural* to all our moist rich grounds. The first is one of the best pasture grasses we have, especially for rich soils. It starts early in spring, and grows late in the fall. It makes a mass of rich leaves, which being but little injured by frost, may lie on the ground through the winter, and afford good support for stock whenever there is no snow, and may even be fed off the next spring, before a new growth starts. It constitutes the principal herbage of most of our best pastures. The fame of the blue-grass pastures of Kentucky, is wide-spread, and they are formed chiefly of this species. But as, for the reason before given, it is desirable to have a mixture, and as the blue-grass does not make so much growth during the drouth of summer, it is well to have with it some timothy, (*Phleum pratense*,) red top, (*Agrostis vulgaris*,) and white clover. The timothy and red-top start later than the blue-grass, and do not stand the frost so well, but will make more growth in the middle of the season; and the white clover will fill up all the interstices, making a close sward. On deep loamy soils, orchard-grass, (*Dactylis glomerata*,) may be substituted for timothy and red-top. It is a strong-growing grass in such situations, and makes an abundance of leaves which are well relished by cattle and horses.

In forming pastures, the following kinds and quantities of seed may be used for an acre:

Kentucky blue-grass,............	16	quarts.
Timothy,......................	4	do
Red-top,.......................	8	do
White clover,..................	2	do

If orchard-grass is substituted for the timothy and red-top, half a bushel of seed will be required.

It should be an object to feed pastures as evenly as possible; the grass should not be allowed to run up to seed; as this is not only a loss of the grass, but weakens the roots and impairs the vigor of the succeeding growth,—exhausts the soil, and injures the quality of the feed for the next year. The "old fog," if allowed to remain on the ground, makes the grass start thin and spiry, makes it sour and unpalatable, so that stock reject it, unless impelled by hunger, and it forms a favorable bed for the seeds of wild plants, which soon spring up. If the farmer cannot so stock his fields as to prevent the grass from seeding, it is better to mow the spots which are not properly fed, in order to get the benefit of the fall feed; and if the "fog" is not got off in any other way, it is best to burn it in spring. It is a maxim with the best graziers, in England and this country, that the pastures should be well cleared off once a year, in order to prevent the accumulation of old growth.

These remarks apply more particularly to those kinds of grass which form large and strong seed stems, as timothy or red-top. Blue-grass has but a small and feeble stem, but forms more leaf. If grass is wanted for winter use, it should be the growth of the latter part of the season, which makes no seed stems.

The improvement of pastures by manure is often inconvenient; they are frequently at a distance from the body of the farm, and in situations difficult of access. It is therefore expensive, and perhaps impracticable to carry manure to them from the barn-yard. Hence, we must resort to concentrated and portable manures; as plaster, ashes, bones, guano, &c. Cattle and other stock are very likely to leave a large portion of their manure where it does comparatively but little good—in woods or groves, or under fences. This manure might be easily saved and turned to good account. Yards might be made in some convenient part of the pasture, (with cheap sheds if desired,) and a layer of leaves, rubbish from the pastures, or muck, to absorb the urine, and prevent the loss of liquids. The stock might, without much trouble, be kept in these yards, nights; and a large quantity of manure in this way accumulated, which would be of great service if properly spread over those portions of the ground where most needed, or where it would do most good. It should be made fine and evenly spread, and bushed or harrowed in.

Wood's Improvement of the Plow.

The following communication, from the daughters of the late JETHRO WOOD, we think cannot fail to prove interesting, as connected with the history of the plow. They have placed before us a large amount of documentary matter, in corroboration of their statements, from an examination of which we may safely say, that "the half is not told" in their communication. The extraordinary perseverance of JETHRO WOOD, was only equalled by the remarkable combination of difficulties he met with—nearly his whole life was spent in labors which resulted in eminent benefit to his country, but which left his family nearly destitute—and, to make an appropriation for his children, now consisting of four daughters, we are satisfied would be but an act of justice on the part of Congress:

The attention which has lately been excited in relation to the history of the improvement of the plow, and the extraordinary and almost unaccountable misinformation which has been spread through papers over the whole country, seems to render it necessary to make a short statement of the facts of the case, all of which can be substantiated by full and authentic evidence.

The late Jethro Wood commenced his experiments for the improvement of the plow, in the early part of the year 1812. Previous to that time, James Small, of Scotland, Robert Ransom of England, and Charles Newbold of New Jersey, had made improvements; after which David Peacock, of New Jersey, in 1814, paid Newbold $1000 for the privilege of using his patent;* (Newbold's plow was never brought into practical use,) and after improvements, obtained a patent himself, known as Peacock's plow: it had a wrought iron share and steel edge. None of these plows were generally adopted by the farmers. According to Judge Leland, of Auburn, (a gentleman intimately connected with the history of the plow,) Peacock's plow cost from $20 to $25, and Small's plow was recommended about or a little before Jethro Wood obtained his patent of 1819, on account of its *cheapness*, being only $22.

Jethro Wood obtained his first patent in 1814, but the invention was a very imperfect one, and was in a few years wholly thrown aside. After five years' labor, he perfected his second patent in 1819, which was his great achievement. The imperfect patent of 1814 has been confounded with the latter by some writers, and its imperfections exhibited as a proof that his invention was destitute of merit, and thus a most unjust and wholly erroneous impression, made by substituting a crude for a finished work.

The difficulties and labors Jethro Wood encountered in perfecting and introducing his plow, were almost incredible. At first, the nearest furnace was in Onondaga county, 40 miles distant; it often happened, when arriving there, that it was not in blast; and sometimes several journeys were necessary to accomplish a single point. According to a statement of Joseph Ridgway, (late Representative in Congress from Ohio,) who aided him at the time, "The cost of the first patterns may be put down at $15,000; the cost of these patterns, however was but an item compared with the expenditures he incurred during the five years he was experimenting, and before he was prepared for combining his piecemeal inventions in the form of patterns, for the plow he got patented. A set of Jethro Wood's plow patterns taken from a set of standard patterns, when dressed up and polished, with their appendages, to cast plows from, may be stated to cost from four to seven hundred dollars, the cost varying according to the completeness of the fixtures for casting from."

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* According to the statement of A. B. Allen, of New-York.

These patterns, in consequence of the prejudice against cast iron or "pot metal," as it was then called, which was considered about as brittle as glass, Jethro Wood was obliged to furnish at his own personal expense to a vast number of foundries and furnaces; and a constant perseverance and travelling was needed to introduce the plow. The unskillfulness of the workmen in those early days was so great, that in many instances, he had to show them by moulding the castings with his own hands; and the prejudices against "pot-metal" were so strong, he was often obliged to give presents to induce them to cast the plow; so that at the expiration of his patent, all his receipts did not nearly equal his expenses, to say nothing of his time and labor. He commenced in comfortable circumstances, out of debt, and ended deeply involved.

But there was another obstacle of a most formidable nature, which rendered his long and laborious efforts a continued series of great difficulties and disappointments, —*a deficiency in the former patent laws.* As soon as by his unwearied labors, the plow had been introduced, infringements commenced; and manufacturers whom he had supplied with patterns, refused to pay premium, and Jethro Wood by resorting to courts of law, could only look forward to defeat, and ruinous bills of costs. The only course left for him, was to strengthen himself by interesting men in his patent; therefore he was obliged to make large assignments of territory, without receiving any pecuniary reward, and without realising any of the benefits he had hoped to receive. Thus the fourteen years of his term was lost to him, while his country reaped the benefits.

In 1832, it was satisfactorily shown to Congress that he had not been remunerated for the benefits conferred on agriculture, by the invention and introduction of his cast iron plow, and the patent was renewed for a term of fourteen years. But a proviso was insidiously inserted in the bill, conferring on the former assignees all the right and privileges they had acquired during the first term of the patent. This proviso almost destroyed the benefits of the extension to the inventor, or his children, by giving to the assignees the largest and best portions of the territory, who had never done anything to merit the consideration of Congress, or for the advantage of the inventor, (with but two honorable exceptions,) but who had made themselves rich by the manufacture and sale of plows. The year following the extension, Jethro Wood breathed his last. The first object of his son Benjamin, (his executor,) was to apply to Congress for an amendment of the patent laws, and several years were consumed before this was accomplished. The second was to commence suits to sustain the validity of the patent. So long as Jethro Wood encountered the general prejudice against his plow, the merit, (or odium as it was then regarded) was fully accredited to him. It was only since its extraordinary value was proved that attempts were made to deprive him of the credit. In consequence of the length of time, witnesses were very much scattered, and pecuniary means being wholly inadequate, the proper witnesses could not be obtained, and from combinations of wealth and numbers, against a single family, the executors suffered several defeats before the patent was sustained. But in the autumn of 1845, after a thorough investigation of all the facts in the case, the United States Circuit Court fully sustained all the points of Jethro Wood's patent, which decision was not made until within a few months of the expiration of the patent, and a short period before the death of the executor.

It is a common but most erroneous opinion, that although Jethro Wood himself reaped no advantage, his heirs have received enormous sums. To disprove this, it is sufficient to state, that it is a well-known fact, that before the final decision of the Court, premiums could not be collected, and the sums received by the administratrices for the brief period of the patent remaining, over and above the expenses of the suits, did not exceed the *small sum of five hundred and forty dollars.* This fact is established by Samuel Stevens, Esq., of Albany, and Judge Leland of Auburn, Cayuga county, as to the cost of the suits; and the affidavit of the administratrices as regards the whole amount of money received by them.

The limits of this article have prevented that appeal to authority which would have corroborated all its statements; documentary evidence could be furnished on all the points. But the following brief testimony from a few persons of high standing in the community, may not be out of place.

Wm. H. Seward, (now United States Senator,) says under date of Nov. 20, 1848, "I am fully satisfied that no citizen of the United States has conferred greater economical benefit on his country than Jethro Wood, —none of her benefactors have been more inadequately rewarded."

David Thomas, for many years chief engineer on the New-York canals, and who was personally acquainted with the efforts of Jethro Wood, from the commencement to the close of his life, furnishes the following testimony: "The exercise of mind and amount of labor to perfect these improvements, can scarcely be appreciated by those who have not been engaged in similar pursuits. It was a new field, and everything had to be learned by experiments. To discover and procure the best material for patterns, and to prepare them, employed him a long time, and a common mind would have shrunk from the difficulties that met him at foundries; oftentimes he had to overcome the unskillfulness or prejudice of moulders, by presents, or by showing them how to manage, with his own hands.

"I am satisfied that all his patented improvements were inventions of his own, originating in his own mind, and to avoid encroaching on what others had invented, he had every volume within his reach that treated of plows, including several Encyclopædias, carefully examined for that purpose.

"To Jethro Wood's name, belongs the honor of rendering the plow that cheap and efficient instrument that we now find it, truly enabling us to cultivate our fields at less than one-fourth of the former expense, and saving millions to the country."

Samuel Stevens, of Albany, says under date of Jan. 8, 1848, "I am satisfied that neither he nor his children have realised anything from that patent; so far as my humble opinion can have any weight, I think there never was a case in which the children of a public benefactor have such strong claims to be secured by the prolongation of a patent, or to receive some remuneration for the mental labor of their ancestor."

John Porter of Auburn, formerly New-York Senator, says, "I have resided and been in active business in Auburn, the principal town in the county of Cayuga, [the residence of Jethro Wood,] for the last thirty years, and have known him and something about his plow business for many years. It is my opinion, made up from observation of his pecuniary affairs, which were pretty well understood by all his acquaintances in this region, that his receipts from his patent-right were at all times small, and altogether disproportioned to the value of his inventions. And I think this opinion prevails generally, among his acquaintances in this country."

Judge Leland, of Auburn, long acquainted with the labors of Jethro Wood, and thoroughly versed in a knowledge of the different improvements of the plow, gives the following statement in reference to those improvements:

"Wood's plow of 1819, is yet equal if not superior to them all—all that was required, was to take his suggestions in his specification, to make the plow longer or shorter, to suit the earth they were to be used in. When his plow was first put into use, the country was new, and full of what was called cradle-knolls, and required a short plow. As the country became more smooth, the plow should be lengthened. This he suggested, and this is all the best improvers have ever done, such as Delano, the Livingston county, and the Genesee county plows, so called."

In addition to the above, Joseph Ridgway, lately a Representative in Congress from Ohio, and long engaged in the manufacture of plows, states that he has all the varieties of plow patterns, and that during the sale of forty-two thousand plows, he sold forty thousand of the patent of Jethro Wood, and but two thousand of the other kinds.

Phoebe Wood,
Sylvia Ann Wood,
Administratrices of Jethro Wood.

Study of the Natural Sciences.

Eds. Cultivator—I was highly gratified with Mr. Buckley's article on the study of the Natural Sciences, in your February number, and hope it will have the salutary effect on your readers which its merits demand. Premising that such will be the fact, we may well anticipate a happy and brilliant change; one of incalculable benefit in the progress of the arts, and of soothing influence on the character of mind, as about to burst forth and flow, like pure and healthful waters, over the land.

To no class of men do these studies present themselves with richer promise of reward, than to the farmer. All his labors are in the great workshop of nature, and all his success depends on his moving in cooperation with her secret workings. She humbles herself, and her firmest rocks waste away to aid him in his designs. The clouds spread over the earth, and drop fatness, to increase his riches. The thunder roars and the lightnings play, to give purity to the atmosphere whose healthfulness is his strength. Even winter, with her howling winds and rugged storms, is to him a visitation of mercy, a messenger of love sent to subdue by frost his unyielding soil, and give repose to vegetable nature, which causes it to bloom with richer beauty and in firmer strength in the bright morning of spring. All nature, from the rolling sun with its planetary escort, to the crawling insect so small as to defy the searching of his vision, and so frail that a breath may destroy it, are his, and operate for weal or woe, in aiding him in his designs.

How wide a field is thus opened for his investigation, and what a variety of objects are brought to make demands on his research? Meteorology, Geology, Mineralogy, Botany, Zoology and Entomology, all have their daily and hourly bearing on his labors. A knowledge of them *all*, is therefore desirable. But the question will arise, how are farmers, secluded as they are from the sanctums of science, to make progress in these investigations? Our reply is, set yourselves about it; find out what you can by observation, and the various publications on each particular science, which in these days are so cheap as to be brought within the reach of all, and so familiarly written that any one of ordinary capacity and common school education can readily comprehend. Getting knowledge is like getting wealth. If the mind is intent upon the object, the labor will be directed towards it, and the end will be attained. And how much more lasting is intellectual wealth than that which is measured by dollars and cents. No fluctuations of the times can depreciate its value. The floods cannot drown, nor the flames consume it.

To the young, these sciences present themselves with peculiar interest. *The young are, by nature, naturalists.* Whoever saw an infant that was not pleased with a flower, a pebble, a shell or an animal. See with what energy it will divest the one of its leaves, as if analyses were already commenced, and with what fondness another is caressed. These principles of nature, if cultivated, would lead to results salutary and honorable; a kind look, an approving word—a whisper from the parent when the mind of the child is entertained by these things, might lay the foundation, if not for a Newton or a Franklin, of a being, wise, useful and happy. Merely allow and encourage them, and their go-aheadativeness will enable them to make rich progress.

But if parents are unwilling to *stoop so low* as to converse with and instruct their children from the book of nature and of wisdom, which no mortal mind has yet been able to comprehend, we will suggest the propriety of introducing the studies drawn from it into our common schools, where every child in the land may have an opportunity, without much trouble or loss of time from other studies, to become acquainted with its valuable contents. A half an hour, or even less time, devoted by the teacher, each day, in talking upon these subjects, will effect much more, than in the outset will be supposed.

Our own experience in this matter is the best testimony we can bring in favor of its truthfulness. In our teaching days we were at one time connected with one of the oldest and best established academies in Massachusetts. When we entered upon our service, there was not a mineral to be found on all the premises, unless it were such as nature planted there, or art had introduced to give firmness and security to the ample dimensions of the building. We had not passed a week within those time-honored walls, before we suggested to some of our scholars the utility of geology and mineralogy, as studies worthy of their notice as matter of pastime if nothing more, and before that week was ended, shelves were prepared and some two or three specimens placed upon them, as the corner stones of a future cabinet. The idea once started, spread with desirable rapidity. The members of the school, instead of spending the hours of recess in indolence, or useless amusement, were awake by times, and abroad in the fields snuffing the pure air, and exercising their muscles to sever a fragment from some hitherto unnoticed rock, to search out its peculiarities, and swell an accumulating list of specimens. All, both male and female scholars, were interested in the new study which permitted them to roam over the fields and seek new objects of observation. Nor were these operations limited to the school. Others became interested, and little children often came to present their minerals, and ask what they were, and what they were good for. The same interest was kept up for years, and for aught we know, until the present time; and when we last visited the cabinet, it presented a rich collection from various sections of the globe.

That the same happy effects will result from like causes in all academies and high schools in our country, there can be no doubt. Let cabinets at once be established, and they will go on to final success. Every new class seeing what has been done by their predecessors, will be anxious to do their part, and coming, as they usually do, from different localities, each can, without difficulty, bring different and various specimens.

But for the *common school*, the academy of the million, the place where probably three-fourths, at least, of all the farmers of the next half century, are to spend their scholastic days;—the seminary, which should be so elevated in its character, that all can be qualified for the most honorable and useful stations in life within its walls; for these institutions we plead, and to them we would commend these sciences as of salutary and practical importance. We are aware that the plea will be urged that we have already too many studies in our common schools; and to this we say, if you have, exclude some of less importance, and introduce those whose practical benefit in the every day affairs of life, has been too long overlooked. The knowledge which is the the most intimately connected with the every day concerns of life, is the first knowledge we should strive to attain, and our every day communings with nature, show that she possesses this knowledge.

Another very plausible excuse is, that children at the age of those attending these schools, are too young to put upon these studies. This is the result of ignorance or prejudice in the matter. They are the very first things, as we have before said, that a child would learn if left to his own inclination.

But we have a course to present which will obviate both the foregoing difficulties, if they can in any way be considered as such. Let the teacher say to his scholars as the spring opens, on such a day, my dear scholars, if the weather permit, I propose that we all amuse ourselves by a ramble in the woods, to witness the beauty that spring is scattering over the lap of nature; I am sure it will be what you will all enjoy, and I hope by your diligence in study, you will all be prepared for the pleasant recreation. And when the time comes, and he goes forth with his happy laughing throng, let him call their attention to the shape of a leaf, the varied colors of a flower, or the qualities of a rock; any one or all of them, as circumstances will permit. Observation will thus be awakened, which will require but little effort to increase. Then let him spend a short time, if no more than five minutes each day, in familiar remarks on some topic of natural science, and we will vouch for it, he will soon find subjects enough, and before his term expires, he will see his scholars not only awake in the matter of investigating these things, but possessing an amount of knowledge honorable to those of greater age. We submit it to you, teachers, to try the experiment, and give us a fair result. WM. BACON. *Elmwood, March*, 1849.

THE SEASON IN VIRGINIA.—Mr. WM. SHULTICE, of Matthews Court-House, Va., writes,—"We had a very severe frost here in April, which destroyed the forward wheat in some places and very seriously injured it in others. Many who had planted corn were compelled to plow the ground again and replant. The early fruits, as peaches, cherries, &c., were totally cut off, except in some favorable locations."

PRESERVATION OF VEGETABLES.—Mr. HAMILTON PERRY, of Lansingburgh, informs us that he has succeeded in keeping beets through the winter by the following mode:—He packs the roots in barrels or casks, with earth in which ashes, at the rate of about a peck to a bushel of earth had been mixed. The roots being placed in layers, and each layer covered with the compost. He states that he has kept them sound in this way three years.

Comparative Profits of Free and Slave Labor.

The following communication, in answer to the inquiries of "A SOUTHERNER," in our May number, is from the pen of a distinguished farmer, who is thoroughly conversant with the subject on which he speaks. In his description of events that have transpired within his own observation, he has been governed by the same spirit of candor which was evinced by the inquiry of our southern friend; by whom, as well as by many others, his remarks will be read with interest.—EDS.

EDITORS OF THE CULTIVATOR—In your May number page 156, a correspondent signing himself A SOUTHERNER, and hailing from Barboursville, Va., asks for information through your paper, upon the subject of the profits of Free as compared with Slave Labor. The information is asked in so frank and proper a manner, with so natural a desire to come to a correct conclusion, that no intelligent northern man, who is a friend to free labor, from honest convictions of its decided superiority over slave labor, as best promoting individual and national prosperity, and who can base his reasoning upon his own personal observation and experience, should hesitate to comply with so reasonable a request.

The comparative prosperity of the North over the South, has been attributed in a great measure, to the superior cheapness of free, over slave labor. Here, is a southern individual, himself a slave-holder, and who acknowledges its unprofitableness, but modestly and properly asks the north—"If you are so much better off than we are, tell us why you are so?" If northern men do not respond to these interrogatories, fairly and fully, let them cease their clamor about free labor, and when, hereafter, they speak in derogation of slavery, they must base their plea upon some other ground than upon its unprofitableness.

Whether I shall meet the question fully and satisfactorily, remains to be seen; but I will not hesitate to premise, that I have very decided convictions in favor of free labor. It may be as well to say that I am a farmer, not from necessity, but from the opinion I have formed of its excellence as a pursuit; and having now followed it for many years, have a growing desire to continue it; because it contributes to my health and happiness, and it is an employment of which I never tire. I take the more pleasure, therefore, in imparting any little information I possess, for the benefit of those who ask it. I have lived long enough to draw practical information from the pursuit of husbandry, as it was practiced in the State of New-York, when we cultivated our farms with slaves; and it being now near thirty years since the emancipation of the blacks in this State took place, we have had an abundance of time to form an opinion upon the relative profits of these two kinds of labor.

It is useless to speculate upon this subject—experience is better than abstract reasoning, when that reasoning is based only upon specious hypothesis. When I therefore, take a retrospective view of the agriculture of the county in which I reside, say from 1805 to 1825, (the last about the time our emancipation bill passed, and which was to go in part into gradual operation,) a county which has no superior advantages of fertility of soil over many other counties in the State, and for which review I had great advantages by frequently traveling over it,—and contrast the appearance of its cultivated farms then and now, I think I can give a ready answer to this knotty question.

Then, the negroes did nearly all the work that was done. The white man, if possessed of any property, spent his time, not on his farm, but on the road and in the tavern, at the horse-race, or where pleasure or amusement called him. For the son of a man of property to labor, except very slightly, was derogatory to his character; and an opinion was very generally entertained, that there was no necessity, much less propriety, for a young man to labor. But how was their time to be spent? To do *something*, is natural to our wishes and habits, and if we are not engaged in something useful, we can hardly be kept out of mischief. It was not the fashion then to give, except to a favorite son, a finished education; but as the majority would not stay at home, where they did nothing, they sought after some employment to spend their time, which employment would naturally be found where others, like themselves, congregated; and that was in public places, and in public or private amusements. In this, they only followed the example of their fathers, who in most instances, after a slight morning survey of the farm would be found either at the country store, or at the tavern. These certainly, could not be the places where an agricultural community could better its condition; where having fled from the labor or hasty direction bestowed upon the farm, they were strongly tempted either to unnecessarily spend the avails of its products, or to form habits of the grossest dissipation. Hunting and fishing were harmless occupations, compared to those taught in these unfortunate gatherings; and how many fine estates have I seen spent, and their owners, and the natural heirs of them, beggared by the indulgence in these idle and vicious habits, practiced by nearly a whole community! In my mind's eye, I can now run over a long catalogue of persons, who at that time were some of our most promising young men, who have fallen victims to those habits of the times, and the estates which they ought to have inherited, passed into the possession of others.

These were the times when the blacks only labored. The white man considered himself above labor. The earnings of the slave, therefore, while they contributed to his support, likewise did their share of his ruin. True, in comparison to population, we had not as many slaves as they have at the south; but we had enough to till our land as it was then tilled, and thus take from us a useful and necessary personal occupation. The labor done by the slaves, had to support the white man and his family, who were only consumers, besides supporting the slave and his family. Here were useless mouths to feed, useless backs to clothe—and successful indeed was that farmer, who under this management, could at the end of the year, make both ends meet. When I recall to mind the imperfect method of cultivation practiced at that time—the want of comforts for the use of man—of care for his stock—the appearance of his farm, fences and outbuildings—the quantity of land lying waste—the imperfect formation of roads and bridges—the want of school-houses for the education of children—of churches to collect the population on the sabbath—and the general lack of prosperity pervading almost all classes, I but recal what I have too often witnessed, and the recollection is too vivid to be soon effaced from my memory.

The morals of the community corresponded to these outward appearances. It was then the custom for the men, both old and young, of a neighborhood, by 11 o'clock in the morning, to collect at the nearest public houses—of which in many townships there were scores—remain drinking and talking over the news until high noon—leave for their dinners, and by 5 P. M. to re-collect to indulge more freely in drinking or gambling; and to while away the time, possibly at a cock-fight, or horse-race, or have a fight among themselves About 12 o'clock at night they retired to their respective homes to re-enact the same or similar scenes the next day. These were events of almost daily occurrence. Idleness was the parent of immorality, and that in turn brought about the ruin of tens of thousands of families.

When we had arrived at about the acme of this state of society, emancipation of the colored race was called for. At first, much objection was made to it by most of the owners of slaves. The cry was—"we shall be ruined. Who is to work our estates? The community will suffer for the want of laboring men, and we all will be impoverished together." But the good sense and patriotism of the freemen of our State, prevailed over all the objections urged; and depend upon it they were not lightly pressed by able advocates; and our bill of emancipation, after a long and severe struggle, at length became the law of the State. I am not aware that much difficulty, for any length of time, was created by this change in the manner of working our estates. Blacks that were liberated, were hired in many instances, and in a short time a white population came forward, and all the labors of the farm went on with more than the accustomed energy. The sons of the farmer, instead of spending their time in idleness and dissipation, from necessity, as it were, became producers instead of consumers. All the industry of the community was called into requisition. It became *popular* for all to labor in their several vocations, according to their respective abilities, and after the lapse of about twenty-five years, an entire change has been wrought in the whole state of society.

As to laborers, the vacuum thus temporarily created was more than made up by white men, and the effect produced by the change, has been productive of the most wonderful and propitious results. The whole face of nature is changed, and all around gives evidence that a great work has been slowly, silently and happily accomplished. The uncomfortable old houses of the farmers have given way to new and more commodious ones. The outbuildings are enlarged, improved, and made ornamental to the establishment. Fences in most instances, are made that will secure the growing crops; waste land improved and brought into successful cultivation; the stock changed into objects of beauty as well as profit; the roads, bridges, school-houses and churches, such as do credit to an industrious, intelligent, thriving moral and religious people. These are the fruits of free labor, calling upon every man to act well his part in society; and the bounties of Providence that have followed, are the strong evidences of what well directed industry will accomplish.

That the benefits flowing from this *state of society* have been fully realised, as far as pecuniary profit is concerned, I will here give by way of illustration, conclusive proof. In the town in which I reside, the soil of which is easily worked but not naturally very fertile, I well remember the time when few men had money to loan, and but little of it could be procured. Were it necessary, I would now name the individuals, but that is not required. How is it now? In a rural population of about 4,000 in the town, and for about four miles each way around me, I know that, independent of real estate, they have at least a million of dollars on loan, and this in most instances belonging to farmers. I will give one more illustration to show that on this point I cannot be mistaken. Within my time, and that has not been very lengthened, lived a farmer near me, who had about 700 acres of our best land, and a personal estate of about six or seven thousand dollars, obtained by inheritance. He cultivated his land with seven or eight negroes, and had a corresponding number of females and children. The owner of these was sober, intelligent and careful, so far as he thought was then required. He had a family of sons and daughters. He died in 1815. His personal estate was spent His real estate was divided among his children. To one son he gave his homestead, and about 160 acres of land. This son discarded the slaves after a short trial—hired his labor done, and although not more economical nor attentive to his business than his father was nor better qualified to carry it on, yet he has added to his estate, and made it more than double in size; and although he has had a larger family to support and educate, he has done it much more thoroughly, and is a man of wealth, independent of the value of his farm. But this is only one instance out of a thousand. It is the application of the theory, that free labor is much more profitable than slave labor. And why should it not be so? Will not two free men do the work of three or four dandling slaves? The one you can discharge if he is indolent; the other you are obliged to maintain, whether industrious or indolent. The one knows that his bread is the fruit of his industry; the other is like the ox who must be constantly goaded to perform his task. The one is economical from necessity; the other looks to his master to supply his every want, both in health and sickness. His family is often more numerous than that of his master, and his imperfect and unprofitable labor is the only restitution he makes. If improvement is necessary in the cultivation of the estate, is he the man to carry it out? If economy is to be practiced in the several departments of farm-labor, is he the man to make that economy effective to the owner? What stimulus has he to urge him on to labor, other than the voice of his overseer? Or why should he practice self-denial? Can such a man fulfil the duties and meet the responsibilities that are required for the improvement of our society, and the amelioration of our condition? Certainly not. One day is to him as another, and the sluggish accomplishment of his daily task, is all that he looks to.

Agriculture is an art that is in its nature progressive. A virgin soil at first, yields bountifully to its cultivator; but like our bodies, if overtasked, without a proper supply of aliment, it soon loses its productiveness; and it requires the exercise of mind as well as the labor of the hands to repay us for its cultivation. And are slaves the persons who can compete with the energy and intelligence of the freeman, so as to make his labor profitable to his owner? The farmers of the State of New-York, for the last ten or fifteen years have made great advances on the method of cultivating their farms. Hence the establishment of state and county agricultural societies, which are only aids in the work of improvement; and they now think of the establishment of a school of agriculture, both theoretic and exrimental, to advance it as a science as well as to make it practical as an art. Are slaves to be taught in these schools, or can they receive any benefit from these establishments? for, to my apprehension they will become most essential aids towards the renovation of the soil in the older states of the Union, where by overcropping they have exhausted their fertility.

But as enough has been said on these subjects, we will now proceed to answer some of the questions of "A Southerner." After stating the number of acres of his farm, (1200) and its proportions of arable, meadow land, &c., he asks—"How can I obtain the labor to keep up about 15 miles of fencing, and to cultivate my farm to advantage?" I answer, that doing the work well, does not require so much fence to be made every year, and that eight good laborers are all-sufficient for his purpose, except a small additional number in harvest-time. I speak from experience. I think I make as much fence as the inquirer, (but not annually,) as I farm about 1,000 acres; and were I as efficient as some of my neighbors, I have no doubt the income from my land would be materially increased; but I have no reason to complain. A northern farmer with that quantity of land, would think he did very poorly if he did not lay up from $2,500 to $5,000 per annum, after all his expenses were paid, besides enjoying the first fruits of his products. But to do this, he would no more think of feeding 60 or 70 persons, than of supporting all the paupers of a parish almshouse. How can a farmer secure anything over for himself, in the way of profits, if so large a number, mostly of helpless persons, are first to be fed, clothed, and supplied, as well in sickness as in health? The result is impracticable, and the master and mistress are the slaves, not those who receive bread from their hands. With the principle of free labor, the people of the north, having tried both kinds, are satisfied which is the cheapest and best, in every sense of the word. Experience has stamped a conviction on their minds that slave labor, for economy, freedom from care, careful cultivation, the advancement of society, both in promoting education, morality, and the prosperity of a people, will bear no comparison with the benefits that result from free labor; and they would no more think of going back to the old system of slave labor, than the freemen of the American Republic would think of going back to the establishment of a monarchial government. The other inquiries, as they are made to obtain information, would naturally be answered by employing competent northern men to take the direction of affairs, and to be left to the manner of farming with which they were accustomed. Changes could only slowly be made, and ought to be conducted with prudence and good judgment, to lead to beneficial results. **NORTHERNER.** *State of New-York, May* 15, 1849.

Agriculture of Seneca County, N. Y.

The report of the Seneca Co. Ag. Society, for the year 1848, prepared by its President, JOHN DELAFIELD, Esq., contains many valuable statistical facts in regard to the resources, improvements, and productions of the county. The report embraces in a tabular form, returns from the several towns in the county. The writer of the report observes that the returns may not be entirely correct, but that "they must be received as the nearest approach to truth, until the Legislature shall adopt the easy and more accurate method of annual returns from the whole State, through the instrumentality of the town assessors."

The staple product of the county is *wheat*, the average yield of which is stated at twenty bushels per acre. The variety called the "Hutchinson wheat" has heretofore been preferred, but the "Soule's" variety is increasing. *Indian corn* has not been much raised, till of late years, the demand for exportation has given quite a stimulus to its culture. The average yield is thirty-two bushels per acre; but many farmers produce sixty to eighty bushels per acre. *Barley* has latterly deteriorated in the county, generally, the yield for 1848 not being over twenty bushels per acre. *Rye* is only cultivated on the lighter soils of the county, which are not so favorable for wheat—average yield twelve to fourteen bushels per acre. *Oats* are quite extensively raised, yielding about forty bushels per acre on the average. *Buckwheat* is raised to a moderate extent, both for the grain and for plowing in as a manure. The *potato* crop has suffered much from the "rot." *Flax* has formerly been cultivated largely for its seed, but has been given up on account of its exhaustion of the soil. The culture of *fruits*, especially apples and pears, is receiving much attention. The county has for some years been celebrated for its apples, which have sold readily at twenty-five cents per bushel. Plum trees have been injured by the "black knot."

The *dairy* only receives the attention necessary for supplying the inhabitants with milk and butter. *Cattle* are said to be generally good. Crosses of the Short-horn, and also of the Devon breed, with the common stock, generally produce good milkers. Much attention is said to be given to rearing horses, which yearly improve in quality. *Sheep* are mostly of the Merino

Estimate of the Principal Products of Seneca County for 1848.

WHEAT.

TOWNS.	Acres cultivated.	Quantity of seed per acre	Time of sowing or planting.	Quantity raised per acre.	Cost per acre.	Whole quantity in 1848.	Whole cost of the crop	Value at the market rates	Profit.	Profit per acre.	Profit per bushel.
		Bushels.		Bushels.		Bushels.		At $1.10			Cents.
Covert, ...	4,000	2	Sept 5 to 25	19	$9 00	76,000	$38,000	$83,600	$47,600	$11 90	62
Fayette, ...	7,200	1½ 2	10 " 25	20	10 00	144,000	72,000	158,400	86,400	12 00	60
Junius, ...	2,800	2	5 " 25	20	5 00	56,000	14,000	61,600	47,600	17 00	85
Lodi, ...	4,320	1½	5 " 20	19	9 00	82,080	38,880	90,288	51,408	11 90	62
Ovid, ...	3,500	1½	5 " 25	25	10 00	87,500	35,000	96,250	61,250	17 50	70
Romulus, ...	3,500	2	5 " 25	13	10 00	45,500	35,000	50,050	15,050	4 30	33
Seneca Falls, ...	2,500	2	5 " 25	20	10 00	50,000	25,000	55,000	30,000	12 00	60
Tyre, ...	1,980	1½	10	16	4 00	31,680	7,920	34,848	26,928	13 59	85
Varick, ...	3,300	2	5 " 20	14	10 00	46,200	33,000	50,820	17,820	5 40	38
Waterloo, ...	2,000	2	5 " 25	13	9 00	26,000	18,000	28,600	10,600	5 30	4
	35,100					644,960	$314,800	$709,456	$394,656		

BARLEY.

Covert, ...	250	2	May.	20	4 00	5,000	$1,000	$2,500*	$1,500	$6 00	30
Fayette, ...	1,100	2	1 " 10	20	6 00	22,000	6,600	11,000	4,400	4 45	20
Junius, ...	700	2½	1 " 10	25	3 00	17,500	2,110	8,750	6,650	9 50	38
Lodi, ...	576	2	April 20	25	3 50	14,400	2,016	7,200	5,184	9 00	36
Ovid, ...	80	2	May 1 " 10	25	6 00	2,000	480	1,000	520	6 50	26
Romulus	575	2½	1 " 10	25	6 00	14,375	3,450	7,187	3,737	6 50	26
Seneca Falls, ...	700	2½	1 " 10	25	6 00	17,500	4,200	8,750	4,550	6 50	26
Tyre, ...	990	2½	1 " 10	18	2 50	17,820	2,475	8,910	6,435	6 50	36
Varick, ...	400	2½	1 " 10	19	6 00	7,600	2,400	3,800	1,400	3 50	18
Waterloo, ...	400	2 to 3	1 " 10	15	5 00	6,000	2,000	3,000	1,000	2 50	16
	5,771					124,195	$26,721	$62,097	$35,376		

OATS.

Covert, ...	1,000	2	May 1 " 10	45	$4 00	45,000	$4,000	11,250†	7,250	$7 25	16
Fayette, ...	2,000	3	1 " 10	35	5 00	70,000	10,000	17,500	7,500	3 75	10
Junius, ...	800	3½	1 " 10	45	2 50	36,000	2,000	9,000	7,000	8 75	19
Lodi, ...	998	2	April 20	50	3 50	49,900	3,493	12,475	8,982	9 00	18
Ovid, ...	1,000	2½	May 1 " 10	45	6 00	45,000	6,000	11,250	5,250	5 25	11
Romulus, ...	1,250	2½	1 " 10	37	6 00	46,250	7,500	11,562	4,062	3 25	8
Seneca Falls, ...	800	2½	1 " 10	38	6 00	30,400	4,800	7,600	2,800	3 50	9
Tyre, ...	1,188	3	1 " 10	25	2 50	29,700	2,970	7,425	4,455	3 75	15
Varick, ...	1,000	2½	1 " 10	37	6 00	37,000	6,000	9,250	3,250	3 25	8
Waterloo, ...	700	3	1 " 10	32	4 00	22,400	2,800	5,600	2,800	4 00	12
	10 736					411,650	$49,563	102,912	$53,349		

INDIAN CORN.

Covert, ...	1,100	¼	M'y10 " 30	30	$8 00	33,000	8,800	$14,850‡	6,050	5 50	18
Fayette, ...	3,000	¼	1 " 8	30	7 00	90,000	21,000	40,500	19,500	6 50	21
Junius, ...	1,000	¼	10 " 20	45	5 00	45,000	5,000	20,250	15,250	15 25	34
Lodi, ...	1,122	¼	10 " 30	30	9 00	33,660	10,098	15,147	5,049	4 50	15
Ovid, ...	1,100	¼	10 " 30	38	7 00	41,800	7,700	18,810	11,110	11 00	26
Romulus, ...	1,000	¼	10 " 30	35	8 00	35,000	8,000	15,750	7,750	7 75	22
Seneca Falls, ...	750	¼	10 " 25	28	8 00	21,000	6,000	9,450	3,450	4 60	16
Tyre, ...	1,584	¼	10 " 15	30	6 00	47,520	9,504	21,384	11,880	7 50	25
Varick, ...	1,000	¼	10 " 25	25	8 00	27,500	8,800	12,375	3,575	3 25	13
Waterloo, ...	1,000	¼	.10 " 30	35	7 00	35,000	7,000	15,750	8,750	8 75	25
	12,756					409,480	$91,902	184,266	$92,364		

* At 50 cents per bushel.—† At 25 cents.—‡ At 45 cents.

breed. Their fleeces average three and a-half pounds each. *Swine* are only kept to consume the offals of the farm. Crosses of the Berkshire, Chinese and Byfield prevail.

The introduction of *improved implements of husbandry* and machines for agricultural purposes, has been of great advantage to the county. *Hussey's Reaping Machine* has been considerably used, and is highly approved. The report says—" By the aid of this reaper, with the previous use of the cultivator, named below, several farmers have been able to raise and prepare their wheat *for delivery*, in perfect order, at a cost varying from twenty-six to thirty cents per bushel." The cultivator alluded to in this extract, is said to have been introduced by Mr. Tracy, of Wayne county, and it is considered an improvement on Ide's. Recent *improvements in the plow*, by Mr. Burrall, of Geneva, and others, are commended. The *corn and cob crushers* of Sinclair and of Pitts are deemed useful to the stock-feeder; and the *portable mill* of Ross & Co. is spoken of with much approbation.

The distribution of the *Transactions of the New-York State Agricultural Society*, and the circulation of agricultural periodicals, are mentioned as " shedding a vast benefit " on the county. " From these sources," says the report, " science is made to confer lasting benefits upon us, driving away and steadily diminishing the misty, baleful influences of ignorance and empiricism."

The tables alluded to, are made up in admirable form, and might advantageously serve as models for other counties and societies. We give above four of them, showing the amount and value of the four principal products, wheat, barley, oats and Indian corn.

The Queen Bee.—It is well known by apiarians that bees will not swarm without a queen goes with the new colony. In order to prevent swarms from going to the woods, some experienced bee-keepers watch for the queen, and when she comes out of the hive, cut one of her wings, which prevents her from flying. The bees will generally make a " pitch " near the hive, when the queen may be secured, and with the young swarm, placed in a new hive. Sometimes the bees may go to the woods, but will return, if the queen is retained.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS

Care of Fruit Trees.

It often happens that young fruit trees, which have been well transplanted and properly attended to in the spring, are neglected at midsummer. The soil becomes hard, and its moisture is withdrawn and its fertility lessened, by a growth of grass and weeds. To remedy this evil, the unskilful cultivator waters the surface, but instead of reaching the roots, the hard soil excludes the water, which only tends to the further hardening and baking of the surface, while the roots remain dry below. Many young trees thus perish in hot weather; or surviving, make a feeble growth, and are more liable to destruction by winter frosts.

Under good management, the soil is kept clean and mellow for many feet about each tree, during the whole season. Treated in this way, the degree of moisture which the earth will retain a few inches below the surface, compared with the meagre supply of a hard or grass grown surface, is surprising, and it renders watering rarely necessary.

Mulching, or covering the ground about the tree with straw, coarse yard litter, or leaves from the wood, will, if timely performed, obviate the necessity of watering, even in extreme cases. Midsummer drouths, will scarcely affect trees thus protected, in connection with a clean mellow surface. A correspondent of *The Horticulturist* mulched 50 trees out of 150, all of which had commenced growth alike. Those which were mulched, all lived. Of the remaining hundred, fifteen perished.

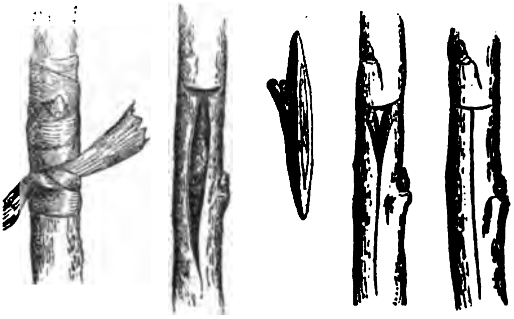
Where, however, trees have been neglected till the period of severe drouth, and where watering becomes necessary the hard surface should be removed as far down as the roots will admit, and the water then poured on, and the earth replaced. Mellowing the surface and mulching will afterwards prove very beneficial.

Instead of watering the roots, which should be very sparingly performed on trees not yet in leaf, a frequent washing of the stems and branches has been found of great advantage to young trees the leaves of which expand tardily. Water applied copiously at the roots, before there are leaves to draw it up, is apt to induce water-soaking and decay; but if the surface of the bark is moistened, immediate absorption takes place through the pores, and a daily repetition, with shading from the sun, will usually restore to freshness and vigorous growth, trees which have become actually shrivelled from drying.

In addition to proper treatment of the soil, and watering, fruit trees need watching against diseases and enemies. The *fire-blight* will soon make its appearance; the remedy is to cut off instantly and burn the limb, two or three feet below the affected part. This course, if faithfully pursued, will in most cases, arrest the disease. The black-knot on the plum needs a similar treatment; but as it spreads less rapidly, little more than the affected parts need cutting off; and where the excrescences are on the trunk or large branches, the wounds should be washed with a solution of copperas. Peach trees should be examined for the peach-worm, which confines itself to the bark at the root, and is hence easily followed in its hole and destroyed. The apple-borer penetrates the solid wood, and is far more difficult to destroy, and it is nearly impossible to save a tree, unless taken early. At first, the worm may be cut out with the point of a knife; or if deeper, it may be punched to death in its hole by a flexible wire or twig. It is asserted that the entrance of the borer may be prevented by removing the soil, and applying a wash of sulphur, soft soap, and tobacco water, to the base of the trunk; and that this mixture is so offensive to the perfect insect, that no eggs are ever deposited in bark to which a coating has been applied.

Budding Cherries.

Inexperienced cultivators are often much puzzled to account for their want of success in budding the cherry. Usually, it should be budded earlier than most other kinds of fruit trees; but there is a certain period in the growth of the stock, most favorable to success, varying considerably with seasons and circumstances. If the work is done too early, the buds will not have become sufficiently matured; if too late, the vigor of growth in the stock will have too much subsided, and adhesion will not take place. The best rule, applicable to all cases, is to insert the buds just as *the terminal buds of the stock commence forming*. Adhesion at this period takes place perfectly, and the inserted buds are usually at that time well hardened. Adopting this rule, we have been quite successful at all the various periods from the middle of summer to the first of autumn.



59—BUDDING CHERRIES.

When the scions are not well ripened, success is greatly dependant on cutting out with the buds a large portion of the wood—say at least one-third of its diameter, or nearly one-half. This prevents the drying of the bud till complete adhesion takes place.

The above figures very distinctly represent the successive stages of budding, and may hence be useful to those not acquainted with this easy mode of propagating fruits, which is not so extensively known as grafting.

Summer Pruning Hardy Grapes.

There are two leading principles to be adopted in the summer pruning of the grape vine:—1. Fruit cannot grow and ripen without the leaves. 2. Shoots and leaves cannot become fully developed in growth, if so thick as to form a dense mass.

The summer pruning of hardy grapes usually consists in cutting or pinching off every shoot, when the grapes are about the size of peas, about three joints above the upper bunch. The object is "to prevent the vigor of the vine all operating in the formation of leaves and wood, and to throw it into the fruit;" as well as to expose the bunches to the action of the sun. Now, the growth and ripening of fruit is wholly dependant on the leaves; and the greater the amount of leaves, provided they are not crowded, and are fully exposed to the light of the sun, the more perfect will be the fruit. For this reason, it is better to reduce the number of shoots, either by leaving but few buds at the winter pruning, or by removing entirely, all superabundant shoots as early in the season as practicable; and to omit *stopping* or shortening the shoots till the fruit is nearly of full size, or about the end of summer, and then only at the extremity of the shoot, leaving all the well-formed foliage.

A very erroneous opinion prevails that the ripening of the fruit is hastened by its full exposure to the sun, independently of other causes. Experience has amply demonstrated that a fully developed and abundant foliage, itself well exposed to the light and air, is the sole influence in the successful growth and maturity of the fruit. Any cultivator may convince himself of this fact, by wholly defoliating a branch of any fruit tree, before the crop ripens, and by taking off a large portion of the leaves on another, and compare the results with a tree in full and healthy foliage, the quantity of fruit being the same in all cases.

Grafted and Budded Young Trees.

Young fruit trees, which were budded the last summer, and headed down the recent spring, or which may have been grafted this year, should be occasionally examined, and all suckers or side shoots from the stock rubbed or cut off, which would otherwise interfere with the growth of the graft or shoot.

Many varieties of fruit trees, and more especially those which approach a horizontal or oblique growth of their side-shoots, will form crooked trees, if the buds are suffered to take their own course from the stock. This may be prevented, and a neat erect form given to them at the point of union, by tying them up closely to the stock, a few inches of which should be left for this purpose, while the shoots are yet young and flexible. When, in a month or two, they have become stiff, this portion of the stock is pared neatly off, and the wound soon heals, and well-shaped trees are thus obtained. With such erect growing varieties as the Early Strawberry apple, Madeleine pear, and Black Tartarian cherry, this may not be so essential, altho' it still adds to their beauty; but with more spreading sorts, as Roxbury Russet and Fall Pippin, or Elton and American Heart, it becomes quite important. The annexed figure exhibits this mode of treatment.

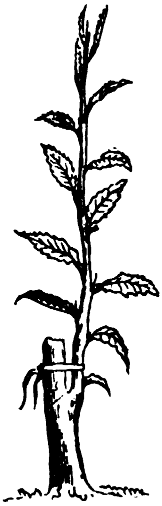


FIG. 60.

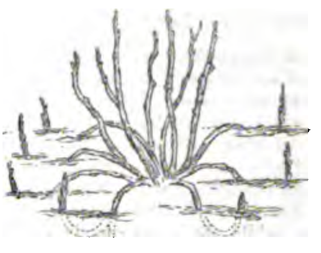
Increased culture of Fine Fruit.

The rapidity of increase in the planting and cultivating of fine kinds of fruit, within the past five years, cannot but afford gratification to every well-wisher of his country. It is only to be regretted that so many fine farms still remain but scantily supplied with the best varieties, and that the majority of the most delicious sorts, are but partially known. E. C. Frost, of Chemung Co., N. Y., furnishes in the *Genesee Farmer*, the following singular instances of a lack of intelligence in this respect, which, happily, are fast passing away to the things that *have been*:

"I once had a hand assisting in setting trees, some fifteen or twenty sorts, and each tree was labelled, who remarked, 'this is all nonsense, so many kinds of apples; there are but two kinds, *sweet* and *sour*.' I have heard persons while eating an apple say, 'what a fine apple this is, how *mealy* and good.' Once a person bought two lots of trees, from different venders, and remarked to one of them, 'I like the other man's trees much the best, because they had so few roots. I could get them into a much smaller hole, and set them out quicker than yours.'" ! ! !

Layering Grapes.

Those who wish to increase their stock of grape vines, should not neglect the proper season for layering. This is a very simple and very certain way to obtain new plants. First make the soil clean and mellow round the main vine, then bend the present year's shoots down into small excavations made for the purpose, and cover the middle portion with soil four or five inches deep. They will have become well rooted by autumn, and may then be separated and set out as new plants. Each layer, being cut in two at the middle, will make two new vines. The annexed figure exhibits distinctly, the mode of making layers.



61—LAYERING GRAPES.

he Peach Crop.

The remark was made in this paper, early the present spring, that most of the peach crop in Western New-York, had been destroyed by the cold of winter. This remark, founded on an examination of the fruit buds in different localities, nine-tenths of which, on an average, were destroyed, has been misunderstood by the editor of the *Genesee Farmer*. It was not intended to give the impression that there had been a total destruction in any one region; and it might have been added that the uninjured remaining portion, would, in all favorable localities, (in one of which P. Barry resides,) be sufficient to furnish a good, though not numerous crop of peaches, which would doubtless be of much better quality for the thinning it had thus received; and which a casual observer would not have noticed when the trees were in full flower.

Utility of Birds—Cherries.

We are gratified to perceive the increase of public opinion against the worse than idle practice *of shooting* birds "*for sport*." Yet we think the *advocates* for the birds do not usually go far enough. Their plea is extended to the robin, the oriole, the thrush, and the numerous classes of sparrows, buntings and warblers, which far overbalance the slight injury they may commit, by the innumerable insects destroyed by them. But we are sorry to see the king-bird, black-bird, crow, and the owls and hawks, placed without the boundary of mercy. The king-bird, if he eats bees, destroys vast numbers of gad-flies; the black-bird and crow are equally useful in another direction, while every farmer may, by simple preventives, save his corn from their depredations. The snakes and mice devoured by the owls and hawks, are incomparbly grea er than the few chickens they may chance to light upon. If beauty is any protection, what individual among the whole feathered tribe possesses the soft and beautiful plumage of the owl, or the symmetry and noble bearing of the hawk? It is time then, that prejudice had given way to justice and humanity.

We know of but one exception among the birds. This is the *cherry or cedar bird*. We have found it impossible to save our cherries, so long as it is permitted to visit our orchard undisturbed. Cedar birds, unlike most others, do not merely devour a certain portion of the crop and leave the rest. They devour, pollute and mutilate, till nothing valuable is left. Last year we lost in a few hours, a fine crop of early pears by their depredations; and a neighbor, nearly his entire supply of superb cherries, consisting by estimate, of twenty bushels. Various remedies have been tried. Flags or strips of muslin, hung in the tree, will repel some birds for a time, but cedar birds are not of the number. Covering with nets is costly, and unless the covering is strong, the birds will break through. The suspension of fragments of looking glass, so strongly and repeatedly recommended by horticultural journals, we have found about as efficient as to try to frighten a locomotive with an umbrella; or as the scare-crow, covered with old clothes, the birds building a nest in one of the pockets. The only remedy is shooting, which if steadily pursued for a few days, will drive away entirely the whole flock of cedar birds. If any of our readers have discovered a better remedy, it would prove of great value to the public if made known.

Time for Transplanting Evergreens.

The following observations on this subject, we copy from the *Prairie Farmer;* and after various experiments which we have witnessed, upon thousands of transplanted evergreens, we have arrived, on nearly every point, at the same conclusion. It is true, the object of the writer has not been to give every essential requisite to success, such as keeping the roots wet from the very moment they are taken up, till they are plunged in mud and replanted; or still better, cutting a large cake of earth with the spade, to be removed with the roots; but as far as the remarks go, they are undoubtedly founded on correct practice:—

"As to the best time for transplanting evergreens, there has been much said first and last; nor do we think the public mind clear on the subject as yet. We do not pretend to understand as well which is, as which is not, the best time. A class of writers have uniformly directed to move them in early summer, when they were in full growth; affirming that then the tree will best overcome the debility caused by a removal. We have learned this much, that such a time is probably the worst that could be selected. It is certainly very far from being the best. Evergreens removed at that season, will exhibit the wilting of the tender shoots, even on a wet cloudy day, nor will a ball of earth removed with the roots, serve to mitigate the difficulty. Such trees can only be saved by the most unremitting care and labor.

"We are of opinion at this time, that evergreens are no exception to the rules which regulate the removal of deciduous trees—and that the best time to move them, will be found to be that in which other trees are moved. Transplanting may, perhaps, be continued later than with others, because they do not begin their growth quite as early. But as soon as the new shoots begin to appear, it is time to stop work among them.

"Another standing error regarding evergreens is, that they must not be pruned on removal. All the reason we have ever heard given, is, they exude gum. If any body should ask—'What if they do exude gum?' we should only be able to give the answer made by the Speaker of the Legislature of Hull. The said Speaker had found his fellow legislators disposed to be unruly. His only mode of quelling the disturbers was to threaten 'to name them.' This was, for many a year, sufficiently potent. Finally, a member ventured to ask the Speaker what would be the effect if he did 'name one?' 'Heaven only knows,' said his dignity, 'I don't.'

"We do not suppose evergreens any exception to other trees in regard to the practice to be followed with them, either as to the time of removal, or as to the fact of trimming. The mode of cutting should be somewhat different from that practiced with deciduous trees. They do not push out shoots so easily from the trunk; and it would not be safe to cut them as close. The best mode of trimming, would be that of shortening the branches; cutting off half or two-thirds their length, as should be preferred. This is also the best mode of trimming small deciduous trees; but in removing larger ones, such as are taken from the forest for shade, it is necessary to practice cutting much more severely; unless they are taken from open ground, and dug up with extra care, so as to save as many roots as possible. If carelessly dug, such trees should be shortened from the top one-third or more, and all the side-limbs entirely removed, leaving them like bean poles.

"This mode of treatment would probably be improper for evergreens, though we have never made any experiments with a view of ascertaining how much cutting they would bear.

"In removing evergreens, or any other forest tree, it should be remembered that those which grow in open grounds, or near them—exposed to sun and air, will be much the best—supplied as these are with many more small roots than those grown in the shade of others."

Clean Culture.

W. S. Wait, of Illinois, remarks in the *Prairie Farmer*, "relative to clean culture for apple trees, I am entirely satisfied, and can assure every man who owns a tree, that cultivation will not only *double his crop*, but add at least *one hundred per cent in value to the quality of his fruit.*"

Accuracy among Nurserymen.

F. K. Phoenix, an intelligent and accurate cultivator, residing at Delavan, Wisconsin, gives the following just remarks:—"Let me tell nurserymen that if they would live and flourish in this age, THEY MUST BE correct. The fog that has been so long and so thick about their business, and that shielded them in the perpetration of many of their errors, is fast being dissipated. The time is coming, and indeed now is, when a good reputation in their business will be worth more than anything else. Not a reputation for *integrity of purpose* alone, but for that perfect knowledge and precaution and care *throughout*, that make mistakes almost impossible, from the getting of the sorts, down through all the changes and manipulations, to the last one of labelling and selling the trees."

Orchard of E. Phinney, Esq.

I have been highly gratified with the "Sketches" of the Lexington (Mass.) farm. But will you allow me to gratify my inquisitiveness, by asking the writer of these valuable sketches, one or two questions.

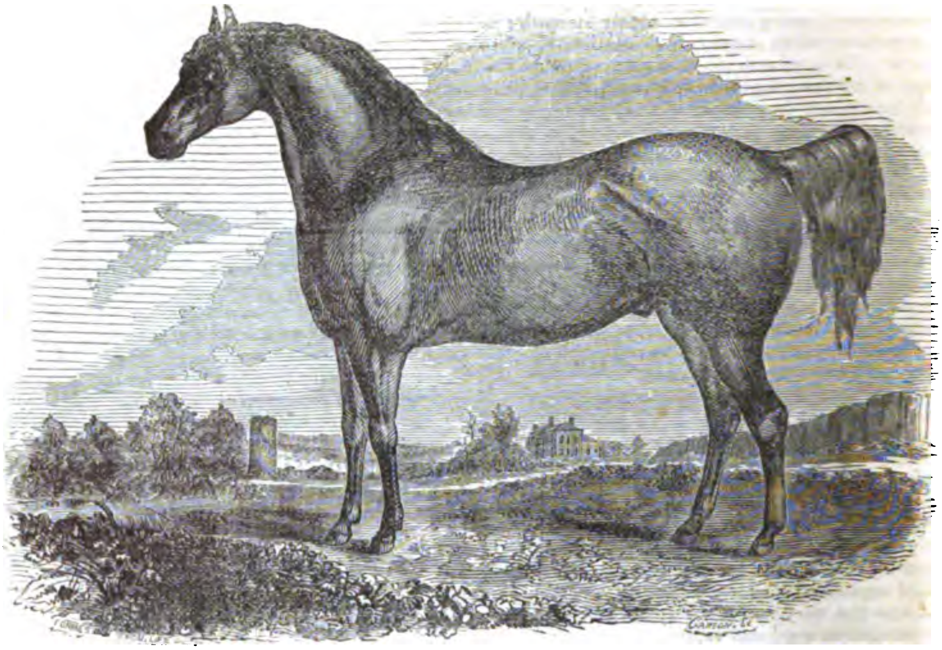
What are those "one or two varieties of sweet apples, which are worth all the rest?"

I think it is stated that the land around the trees is kept under constant cultivation. In this case, is it not necessary to place something around the trees to protect them from injury during the plowing, harrowing, &c.? If so, what kind of fixtures are found most efficient and economical? S. W.

The Scarlet-Flowering Currant.

The following fact, stated in a letter from DAVID THOMAS, will doubtless be interesting to all those who have cultivated this beautiful shrub, but from its tender character, have been compelled to give it winter protection:—

"*Ribes sanguineum* has proved entirely hardy in the south (shady) border, though it has always been tender where the rays of the sun could strike it when frozen. This is a fact worth knowing; and I can ascribe it to no other cause."



Morgan Hunter.

It has been well remarked that, though a picture may convey too favorable an idea of a defective animal, yet it is impossible to portray all the excellencies of a good one. Making due allowances for the latter difficulty, the above figure may be considered a correct likeness of the horse from which it was taken.

"Morgan Hunter" is six years old; was bred, as we are informed, by Mr. Exwell, of Springfield, Vt.; was got by Gifford Morgan, dam by the same horse.* He was sold by F. A. Wier, of Walpole, N. H., in May last, to Messrs. Ackley & Gilbert, of East Hamilton, Madison county, N. Y., and stands the present season, at the stable of S. A. Gilbert, in that town. He is a capital specimen of the Morgan family of horses. In his general form, he possesses in a remarkable degree, what Youatt lays down as the most important requisite in a stallion—*compactness*—"as much goodness and strength as possible, condensed in a little space." His head is fine, and his eye large and brilliant; his chest capacious, barrel round, loin very broad, back short, quarters long and muscular, flanks deep and full, limbs short-jointed, flat and sinewy. In temper and spirit, he exhibits the intelligence and docility, which characterise most of his near relatives. Like the high-mettled Arabian, he unites the playfulness and good humor of a pet lamb, with the courage and power of the war-horse,—whose 'neck is clothed with thunder,'—'who rejoiceth in his strength,' and 'mocketh at fear.'

The history of the Morgan stock of horses has been fully given in previous pages of *The Cultivator*. Some people, however, who have not fully investigated the matter, seem to entertain the idea, that they originated with a cross of the French or Canadian horse. We have never seen the least evidence that the original, or as he is called, the Justin Morgan horse, possessed any of this blood; and of the four stallions which were kept of his get, we believe the Bulrush or Chelsea Morgan, was the only one that inherited any French blood through the dam.

We notice various advertisements and cuts of horses, as "Morgans," in the papers of different parts of the country. A comparison of those descriptions and their originals, with the cut at the head of this article, may serve in some degree, to show whether the animals truly represent the stock whose name they bear, or are only counterfeits.

Pasterns of the Horse.

The following sensible remarks on the form of the pasterns, are copied from Youatt's work "*The Horse.*"

"In proportion to the obliquity or slanting of the pastern, will be the stress on the fetlock-joint, and, therefore, the liability of that joint to injury and *strain;* and also the liability to 'sprain of the back *sinews*,' from the increased action and play of the flexor tendons; and likewise to injuries of the pastern-joints, for the ligaments will be weak in proportion to their length. The long and slanting pastern is an excellency in the race-horse, from the springiness of action, and greater extent of s ride by which it is accompanied. A less degree of it is necessary in the hunter, who is to unite continuance of exertion with ease of pace, and who, in his leaps, requires almost as much springiness as the race-horse; but for the wear and tear of the hackney, a still less degree of obliquity should be found. There should be sufficient to give pleasantness of going, but not enough to endanger continuance and strength. Experience among horses will alone point out the most advantageous direction of the pastern, for the purpose required; but the slightest observation will prove the necessity of considerable variety in the structure of this part. Let the reader imagine the heavy dray-horse, with his short and upright pasterns, contending in the race; or the race-horse with his long and weak pasterns, endeavoring to dig his toe into the ground to move some heavy weight. The concussion is little in a cart-horse because his movements are slow, and therefore the upright and strong pastern is given to him, which he can force into the ground, and on which he can throw the whole of his immense weight."

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* For pedigree of Gifford Morgan, see Cult. for 1846, p. 286

The Poultry Yard.

The Curassow.

It is probable that all our domestic birds, were some time or other, reclaimed from a wild state. Such we know to be the fact in regard to some of them. The turkey, for instance, was unknown on the Old Continent till after the discovery of America, where it was found only as an inhabitant of the forest. The common domestic goose has been traced to the European wild goose, and the common duck to the wild mallard.

In reference to the domestication of birds, the question has been asked—" Can we tame more of them ?" Everyday's observation brings more or less evidence in favor of the affirmative of this question. The only point to be considered is, whether any birds that are susceptible of domestication, will prove useful; and even this must be finally determined by experiment, though we may be influenced by probabilities in making the attempt.

63—CRESTED CURASSOW.

The Curassows (*Cracidæ*) are included in the gallinaceous order. The family embraces several species, all of which are natives of Mexico and South America. We are informed that in parts of these countries, they have been long reclaimed, and a writer observes that " it is really surprising, considering the extreme familiarity of their manners, and the facility with which they pass from a state of nature to the tameness of domestic fowls, that they have not yet been introduced into the poultry yards of Europe." It is stated on the authority of Temminck, that they were once thoroughly acclimated in Holland, and were as prolific in their domestic state as any common domestic poultry; but that he establishment where they were kept, was broken up n the commotions which followed the French Revolution. Several of the species are described as of considerable size, of beautiful plumage; and their flesh is aid to surpass in whiteness and delicacy of flavor, the common fowl and even the pheasant.

The figures herewith given are those of the crested *urassow* (fig. 63,) and *galeated curassow* (fig. 64.)

" The galeated curassow," says Martin, " equals a en turkey in size; it is a native of the forests of Mexico, where it lives in large flocks, which frequent the ranches of the tallest trees. It is said, however, to make its nest generally on the ground, a circumstance he more favorable for its naturalization as a domestic ird. The young are led about by the female, following er exactly in the same way as the chickens of the orinary fowl, or of the pheasant or partridge, following heir respective mothers, obedient to her call. At first he young feed principally on insects and their larvæ, such as those of ants, &c., which are everywhere abundant; by degrees they begin to feed on various seeds and fruits, much in the same way as does the young of the turkey, which bird, in many of its general habits, this species appears to resemble."

" The crested curassow equals, or rather excels, the preceding species in size, and is a very graceful and noble bird; it is a native of Mexico, Guiana, and Brazil, and in fact appears to have an extensive range over the warmer regions of the American continent. It abounds to such an extent in the woods of Guiana, that M. Sonnini regards it as one of the surest sources of supply on which a traveler penetrating the vast forests of that region, with his gun only, to which he must look for subsistence, may place his reliance. This bird congregates in numerous flocks, which are in general little disturbed by the intrusion of man into their haunts; indeed, so unsuspicious are they, that when their ranks have been thinned by the fowling-piece or rifle, the rest have remained quietly perched upon the trees, as if unconscious of the havoc committed amongst them. In the neighborhood of inhabited places, however, where their proximity to man, who is their most active persecutor, has taught them to fear him, they are far more wild, cautious and distrustful, and recede deeper into the recesses of the wood on the approach of the hunter, who nevertheless destroys them in great numbers. They build large rude nests on the branches of trees, constructing them of twigs and sticks, interlaced with stalks of herbaceous plants, and lining them with a bed of dried leaves and grass. According to Azara, the female lays eight eggs (Sonnini says five or six,) nearly as large as those of a turkey, but white and thick-shelled.

64—GALLEATED CURASSOW.

" In captivity, the crested curassow is gentle and familiar, and according to M. Ameshoff's experience in his vivarium, may be domesticated with very little trouble. The galeated curassow is a fine bird, but we think this species to be altogether more graceful; its beautiful forward-curled crest is an elegant ornament, it consists of velvety feathers, from two to three inches in length, and is capable of being raised or depressed, at pleasure. The eyes are surrounded by a naked skin, which extends to the cere. The general plumage is of a deep black, with a slight metallic gloss of green, the abdominal region being of a dull white."

Profits of Poultry.

EDS. CULTIVATOR—In looking over *The Cultivator*, I saw a number of accounts of the profits of keeping poultry; having kept an account myself the past year, I propose to add my experiment to the number. My account commences on the first of April, 1848, with thirty-three hens and two cocks, and is as follows:

Poultry establishment, Dr.

To 35 fowls, at 37½ cents each,	$13 12½
22¾ bushels of corn,	13 93
Labor fixing hen-house,	50
Total expense, excluding labor of feeding,	$27 55½

Cr.

By 2966 eggs,	$31 23
47 chickens,	7 67½
4 fowls used during the season,	1 16
31 fowls on hand, at 37½ cents each,	11 62½
Total receipt for the year,	$51 69
Deduct expenses,	27 55½
Leaving a balance of	$24 13½

On the 20th of May I shut them up in a shed adjoining the barn, letting them out an hour or two before sundown, each day, the principal object being to prevent their destroying a piece of corn near by. After the corn was out of danger, let them out at noon, that they might have more time to ramble round the farm, and pick up insects,—considering it necessary that they should have an abundance of animal food of some kind to ensure their laying well. The feed was all corn, at an average price of a little more than 60 cents per bushel. Most of the eggs were sold for about $1 per hundred. In July, there were some sold for 13 and 14 cents per dozen, and those sold in September and after, averaged about 14 cents. The chickens did unusually well,—not having lost more than half a dozen during the season; they were sold during the months of July and August, at from 30 to 33 cents per pair. JAMES H. BALL. *Nassau, May* 14, 1849.

The Veterinary Department.

Cure for Heaves.

MR. PHILO ADAMS, of Huron, Ohio, sends us the following recipe for heaves in horses, which he says he has tried with the best effect:

In the first place, keep your horse on wet or chopped feed until the medicine takes effect, which from the time it was given will not be over two weeks, at the longest. Take one and a-half gills of angle or fish worms; wash them clean; drain the water from them, and put them in some vessel that can be covered tight. Put on the worms spirits of turpentine enough to kill them. Let them stand twenty-four hours; then put them in a bag, and tie them on the bits. Keep them in the horse's mouth, except when you want him to eat, till the contents of the bag have been swallowed. If the horse is not cured, or nearly so, in eight or ten days, give him another similar dose, which I think will effect an entire cure.

Important to Dairymen.

EDS. CULTIVATOR—The experience of many a dairymen has taught him the necessity of a remedy for that obstinate disease, usually denominated "Horn-ail"—the symptoms and remedy of the disease are as follows:

Symptoms.—Cold horns, sudden falling off in quantity of milk; general appearance drooping; dull eyes, &c.

Remedy.—6 spoonsfull soot,
1 " black pepper, ground.
1 " ginger,
1 " salt,
3 eggs.

All well stirred together; add sufficient meal to make it convenient to handle in balls; draw out the tongue with one hand, and pass down one ball as far as practicable—let go the tongue, and hold up the nose till it is swallowed. In like manner give the rest.

The above dose repeat three or four mornings, and it will effect a cure.

The horns should have nothing done to them.

Should the above appear to the editors, of any avail to their numerous readers, they are at liberty to publish. It has saved me many valuable cows. M. S. BAILEY. *Bouckville, Madison County*, 1849.

P. S. Cows hard to milk, may be rendered easy by squeezing the teat full of milk, and passing up a penknife blade three-fourths of an inch.

Neurotomy.

A question has arisen how far a horse that has undergone the operation of the division of the nerve of the leg, and has recovered from the lameness with which he was before affected, and stands his work well, may be considered sound. In our opinion, there cannot be a doubt about the matter. Does the operation of neurotomy render a horse as capable of work as he was before he became affected with the disease on account of which, and to relieve him from the torture of which, the nerve was divided? Is the operation of neurotomy so invariably followed by capability, and continued capability of ordinary and even extraordinary work, that they may readily be considered as cause and effect? The most strenuous defenders of the nerve operation cannot affirm this. They can only say that they partially succeed in almost every fair case,—that they perfectly succeed in the majority of cases; but they cannot deny that the horse will batter and bruise that foot, when he has lost sensation in it, which should have been tenderly used; that even the hoof will sometimes be lost, after operations performed with the greatest judgment; that the lameness will sometimes return after the animal has gone sound, one, two or three years; and that, after all, there is a little unpleasantness in the action of the horse, from the peculiar manner in which the foot meets the ground when its feeling is destroyed; and that the horse is more liable to accidents, for he will travel on without warning his rider of the evil, after a piece of glass has penetrated his foot, or a stone has insinuated itself between the sole and the shoe; and thus irreparable mischief will be done, before the cause of it can possibly be detected. A *horse on whom* this operation has been performed *may be improved*—may cease to be lame, may go well for many years; but there is no certainty of his continuing to do so, and he is unsound.—*Youatt.*

Warts.

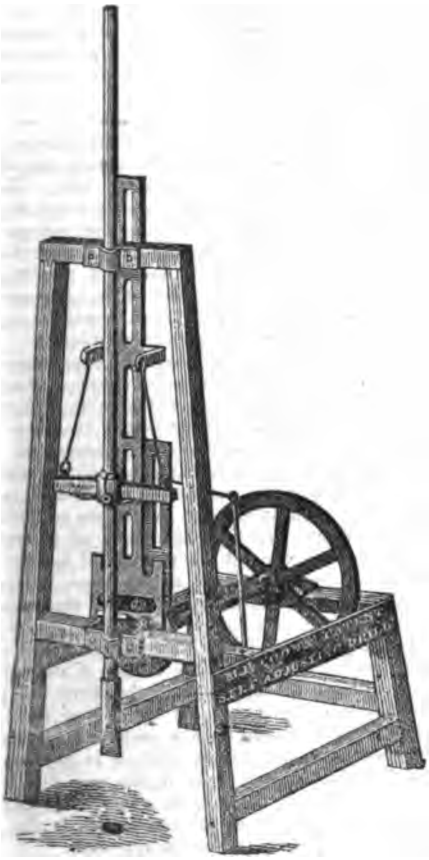
These are tumors of variable size, arising first from the cuticle, and afterwards connected with the true skin by means of the vessels which supply the growth of the tumors. They are found sometimes on the eyelids, on various parts of the skin, and on the prepuce. They must be removed by an operation. If the root be very small, it may be snipped asunder with a pair of scissors, close to the skin, and the root touched with the lunar caustic. If the pedicle or stem be somewhat larger, a ligature of waxed silk may be passed firmly round it, and tightened every day. The source of nutriment being thus cut off, the tumor will, in a few days, die and drop off. If they are large or in considerable clusters, it will be necessary to cast the horse, to cut them off close to the skin, and sear the root with a red-hot iron. Unless these precautions are used, the warts will speedily sprout again.—*Youatt.*

Hoe cabbages while the dew is on, and make hay while the sun shines.

The Farmer's Note-Book.

Coons' Patent Drilling Machine.

This machine is in many respects different from any before used for the same purpose. The inventor claims its superiority on account of its simplicity, cheapness, durability, portableness, and its capability of working a line of drills by the power of one man—the machine admitting any number of drill-shafts, and permitting he action of the drills within six inches of each other. Built on a large scale, it may be readily driven by horse, team or water power. The original object of Mr. Coons, in the invention of this machine, was the advanage of its use in the erection of his patent fence, noiced in our last. A machine of proper size to drill the oles used in this kind of fence, will cost thirty to forty ollars, and will, it is stated, do the work of four hands, nd in a more accurate manner than it can be done by and labor.



65—COONS' PATENT DRILL.

Any further information in regard to this machine, may be had by addressing M. P. Coons, Lansingburgh.

Potatoes vs. Corn.

Eds. Cultivator—I noticed, in perusing the May umber of your periodical, a piece entitled "Potatoes xhaust the soil," with which I cannot agree. In fact, my experience does not coincide with that of the article mentioned. Five years ago I planted a piece of ground ith corn and potatoes; manured the whole at the ame time, and distributed it as equally as possible. The next year, sowed it with oats, and as I was in the eld one day, I looked at them to see how they were growing, and noticed quite a difference in them. The oats, where I had taken off the potatoes the year previous, were at least one-third larger than where I had taken off the corn. The next year I mowed the piece, and there was quite as much difference as with the oats, and it is plainly to be seen to this day. Since that time I have taken notice, and have found the effect to be similar. Now how can this difference be accounted for, if corn is not a greater exhauster of the soil than potatoes?

If what our friend stated be true, (which I doubt not,) it must be that these crops operate very differently on different soils.

I wish some of your numerous correspondents who have made observations, would give us the result of their experience in this particular. A. K. *Hartford, May* 18, 1849.

The Farmer's Vocation.

Eds. Cultivator—Those that obtain an 'honest living' by whatever means employed, are entitled to respect. All trades, occupations and professions, have their advocates and followers, and it is no part of our business to institute invidious comparisons as to which is the most respectable. As farmers, we have no reason to be ashamed or to think lightly of our vocation. Though we may be obliged to obtain our living by the 'sweat of our brow,' it need not lessen our independence or enjoyment. We are not obliged to bow to kings or despots for our daily bread; nor wait the capricious will of another, to receive the reward of our labors.

Not many years ago, there seemed to be a disposition among farmers' boys to leave the farm and engage in mechanical, mercantile and professional pursuits. Then farming was not looked upon in the same light that it is now, being considered an employment that needed little knowledge; one, which those the most ignorant, or those of the feeblest intellect might pursue advantageously. Since then, "a great change has been going on in the public mind" in regard to it. It is becoming better understood and appreciated. Agricultural journals have called attention to the importance of agricultural pursuits, and political, scientific and even literary periodicals have lent their aid to advance the interests of the farmer. Now, men holding the most exalted positions, in government, in theology, in science, or in literature, may engage in agricultural occupations, without compromising in the least, their dignity or respectability.

To engage in farming understandingly and successfully, requires mechanical skill, intellectual action, and scientific knowledge.

Mechanical knowledge implies the use of tools. This is an important branch of husbandry, for it requires as much skill to guide a plow or swing a scythe rightly, as it does to use a plane or trowel. This knowledge in farmers is not intuitive; it must be learned. Farming is practical business, and practice in the use of tools is the only way to become skillful in using them. In this respect, farming is a trade, and requires mechanical skill.

Farming requires intellectual effort. In the management of a farm, there must be thought and calculation. Even if a person works alone, he must think. He should study to know the best means adapted to the end in view. It may seem easy enough to know the proper time to sow, plant, or harvest, but to do these things in the best time and way, is difficult. And so of all the work of a farm. There is a great difference between going to work understandingly, and at hap-hazard, thinking nothing of the circumstances. True it is that like causes acting under like circumstances, produce like effects; but here, circumstances differ so much between cause and effect, in each separate instance, that they must be scanned closely in order to obtain even an approximate knowledge of the result. A lawyer must learn fully, the case of his client, and a physician must examine closely his patient, to know how to act, so a farmer should study his business to know how to direct his labors.

A farmer should be well informed. Not only acquainted with the various modes of cultivation in his own vicinity, but as much as possible, with that of the different parts of his own country, and of all other countries. To do this, need not *cost* a great deal in this age of cheap reading. The multiplicity of publications and periodicals adapted to his wants, so cheap withal, renders him without excuse, if he is not constantly adding to his stock of information. In the 'good time coming,' it will undoubtedly be necessary that the farmer not only be well informed, but *educated*.

It is also important that the farmer should have some knowledge of chemical science. He has to do with nature, and in her operations, from the reviving of vegetable life in spring, to the ripening of the last fruits of autumn, chemical changes are constantly taking place. The elements of the soil enter into new combinations in all that grows out of the earth. These elements and their combinations should be understood. If a soil is fertile or sterile, it should be known why it is so. If a crop fails, it should be known what ingredients of soil were necessary to perfect it. The 'whys and wherefores' of all this are generally guessed at; if we guess right, well and good; if wrong, we must make the best of it. How much better is it to *know*, than to have unsatisfactory opinions of the relation between cause and effect in the processes by which Nature accomplishes her purposes. Farming *is* a science, and a theoretical knowledge of chemistry is of great advantage in conducting its operations successfully.

'All honor to the toiling hand,' but more especially to him who discovers means to advance agricultural interests, or to increase agricultural knowledge. W. L. Eaton. *East Weare, N. H., May*, 1849.

Driving Swine.

Eds. Cultivator—An article in the February No. of *The Cultivator*, on *"removing swine,"* suggested the propriety of sending to you for publication, my method of removing swine, *on foot*.

Swine are, proverbially, a most untractable and contrary animal; and are not a little akin to some bipeds of the human species in this respect, whom we must attempt to drive in an opposite direction, in order to get them where we would have them.

When I wish to drive a hog—if I wish to do it *easily*, *expeditiously*, and with the *greatest safety*—(for I have often seen hogs dogged and beaten, in a most unmerciful and cruel manner, and all to no purpose)—no matter how large they are, I tie a small rope around one of their hind legs, while they are eating, at their trough; and then let them jump: in a few moments they will be as manageable as an ox with a ring in his nose, and may be driven where we will. With a rope around his leg, a hog may be driven much sooner and with less effort, than a score of men, boys and dogs could drive him with all their whips and clubs. Sows with pig may be removed in this way, where the distance is short; and thereby avoid all danger of injuring them in a contrary chase, of which there would be much danger, if they were not disposed to be driven quietly.

This mode of operating would, without doubt, prove quite as efficient in driving any other animal, that was not accustomed to be led. Let it be tested. S. Edw'ds Todd. *Lake Ridge, Tompkins Co.*, 1849.

A Cultivator and "The Culivator."

Eds. Cultivator—A cultivator for the soil, is used with universal benefit. Some soils, however, will receive more benefit from its frequent use than others. Light soils lose nearly as much, when used too frequently, in the escape of gases, as they gain from stirring the ground, killing the weeds, &c. This loss might be avoided, by the addition of a small roller immediately behind the cultivator, and attached to it, to slightly press the surface, which will prevent any increase of evaporation—a source of more loss, particularly in light soils, than leaching.

"The Cultivator" for the mind, may be used with equal success. Should it cause, in some minds, a tendency towards a superabundance of theory, let the soil be rolled or pressed by a little bodily labor. Experience will tighten up the surface, and prevent any loss except by *leaching*, which never can be increased by "The Cultivator." Stirring the soil is probably the principal benefit derived from the use of a cultivator; therefore, everything in the way of its frequent use should be removed if possible, that it may be applied oftener than the killing of weeds might require.

All may observe, who will try the experiment, the difference in a field of corn, where a cultivator has been through one part four times, and another twice; but the difference is frequently attributed to some other cause, or accidental combination of causes; it being difficult to comprehend how the mere stirring the soil between the hills could change the colour and growth of the crop to such an extent. When we consider the attraction existing between the roots of plants and their nourishment, through the medium of innumerable spongioles, whose office is to search after, select and suck up such materials as are fitted for their use, we shall see that the lousening of the soil facilitates their approach to particles of nourishment that would otherwise be unattainable, while the motion of the soil admits more freely the approach of the attracted particles. This may be illustrated by mixing fine steel filings with sand, spread upon a table, with a magnet in the midst, and stirring the mixture in any way, or jarring the table by striking on it, the steel filings will be seen to approach the magnet every time their repose is disturbed, while all other particles in the mixture will be as liable to recede as approach.

There is something striking in the comparison between a cultivator for the soil, and "The Cultivator" for the mind; but there is a difference: while the one kills the weeds, and puts in motion the soil, thereby facilitatiug the approach of the roots and their nourishment, the other not only fills the place of idle speculations, puts the mind in motion, and while it facilitates the approach of nourishment from other sources, actually furnishes some of the most essential ingredients for the strongest growth.

As the earth may be cultivated more successfully by the application of a properly cultivated mind, so the mind may be fertilized by contemplating the causes and effects of a well cultivated soil. "To him that hath, shall be given," is written by divine inspiration, and copied by Nature into every well cultivated field, as God's truth. The soil that sends forth the most luxurious growth is assisted most with nourishment afforded by the atmosphere. That every plant depends more or less upon the atmosphere for sustenance, is universally admitted. That most plants draw a large share of their support from it, is also evident, from the result of numerous experiments. As the greater growth of root extracts more from the soil. so the more luxuriant the leaf, the greater the capacity to draw from the atmosphere When you add fertility to the soil, by manuring and by judicious cultivation, so as to increase the growth of our crop, you place yourself in the situation of him hat hath, whereby you will receive, not only the advantages of a more retentive soil, but the fertilizing ualities in the atmosphere, which perhaps have floated ver many barren and badly cultivated fields, where he crops had not the surface of leaf or strength of contitution to attract them. Thus, you not only receive he increase of your two or five talents, but that which taken from him that hath not. Such are some of he inducements held out to the farmer, "to improve he soil and the mind." Dean. *Lyonsdale, February*, 1849.

Transmutation.

The notion of the transmutation of wheat into chess, not yet quite extinct. The editor of the *Michigan 'armer* cautions his readers against the attempt to aise wheat on wet land, because, he says, "*if the lant survive, it will be more likely to be chess than heat.*" He declares his readiness and ability to maintain his "position," that wheat will change to chess, y "incontrovertible facts;" and adding a word of lamentation on the "blindness and inconsistency of poor uman nature," he goes on to state that—"The men who maintain that wheat never degenerates into chess, enerally undertake to sustain their position by theoetic reasonings, in opposition to the most undoubted acts before their eyes; and yet these are the very nen, generally speaking, who rant against book-farming, because, they say, it consists in visionary theories, egardless of practical experience"!! The article concludes by reiterating the assertion, that—"the doctrine of transmutation may be triumphantly sustained."

The obstacles to the successful culture of wheat on wet ground are sufficiently numerous, without adding he fear of transmutation. The idea, however, is new o us, that—"the men who maintain that wheat never legenerates into chess, are the very men, generally peaking, who rant against book-farming"! But we hope our friend will favor the public, as soon as practicable, with his "incontrovertible facts," in proof of ransmutation; for we have never seen any such proof. The doctrine has been long asserted, and to its advocates belongs the duty of demonstrating its truth. It s contended that wheat, under certain circumstances, s converted into chess; and if it is so, we do not see why the fact may not be clearly established. For instance, take a quantity of earth, suitable for the growth of wheat, and subject it to such a degree of heat as will be sure to destroy the vitality of any seeds it may contain; put the earth in pots of suitable size, and sow certain number of wheat grains in each; note the umber which come up. Subject the plants to the rocess deemed most likely to cause transmutation.

It is an original law of nature, that the earth shall bring "forth grass and herb, yielding seed after its kind." [Gen. i, 12,] and the transmutation of a plant nto another, of a distinct genus, is so great a deviation from this law, that nothing short of the most unequivocal and positive evidence can warrant its belief.

We notice that the *Berkshire Culturist* hints at a 'solution of the chess difficulty," on the ground of *ross-impregnation*. A correspondent of that paper gives some instances of the intermixture of different kinds of beans; and the editor, in commenting on the circumstance, relates similar instances of the mixture of different kinds of Indian corn. We see nothing particularly striking or unusual in the cases cited; certainly, they fall very far short of touching the point under consideration,—the mixture of wheat and chess. If the "scarlet runners" (beans) had mixed with peas, or the Indian corn with wheat, there would have been something more analogous to the supposed mixture of wheat and chess. But the mixture mentioned, was with plants of similar varieties, belonging to the same species. Wheat (*Triticum*) and chess (*Bromus*) are not only different species, but of different genera,—as much so as wheat and oats, or wheat and Indian corn. When it is proved that these hybridize, we will admit, with our friend of the *Culturist*, that "the subject is worth examination."

But hybrids, whether plants or animals, show traits of their diverse parentage. Nothing of this kind is exhibited by chess. We have never seen or heard of any special variation in the species (*B. secalinus*,) to which it is alleged wheat changes; and there is no reason to doubt that it has produced "seed after its kind" from the beginning.

No Protection to Crows.

Eds. Cultivator—The New-York *Farmer and Mechanic*, contained an article copied from a Massachusetts agricultural paper, headed "Protection to Crows," in which the writer asserts that crows are a benefit instead of injury, to the farmer; that they do more good by destroying worms and insects, than injury in pulling up corn; that soaking corn in tar-water and rolling it in plaster, will prevent crows from pulling up corn. I know by experience, that corn thus prepared is not always secure from the attacks of crows; true, they will not eat much of it; but they will pull a hill here, and a hill there, in hopes of finding the pure article, until a large portion of the corn is pulled up.

Twine, stretched around the corn field and several times across it, is the method generally adopted by the farmers in this neighborhood to protect their corn-fields from crows, and it rarely if ever fails to be effectual. But the damage done to our corn-fields, is but a small part of the sum total of the injury that we have to suffer from these rascally depredators. I am their decided enemy, and believe them to be the most mischievous and thievish of the feathered race. They destroy our eggs, chickens, young turkeys, and sometimes even venture to attack young lambs, which they soon kill by plucking out their eyes—however they rarely, in this section, kill lambs, except when these animals are enfeebled by cold storms, and lie in fields or woods remote from the house. When hens or turkeys have nests a little distance from the house or barn, I have known them to watch until the hen or turkey left the nest, and then seize the egg and away.

Two years ago, the spring was far advanced, and I could not find the nest of an old hen turkey. After many fruitless searches, one morning I missed her, and after hunting a short time, saw an old crow perched on the highest of a group of fruit trees, (about twenty rods from the house,) beneath which was the turkey on a nest, among the high grass in one corner of the fence. Thinks I—"old crow, you don't get these eggs." I went to the house, watched to see the turkey leave the nest. At last I saw her coming towards the house, and started to get the eggs, when the crow, although I was in full sight, and halloed, flew into the nest, siezed the newly laid egg, and flew away. The nest was empty. To carry eggs, they thrust their bills into them. Their destruction of the eggs of birds is great, especially of those species which build open nests. In western New-York during the last few years, crows have increased, while many other species of birds have become rare. The American Robin, Ferruginous Thrush Cat-Bird, and many others are seldom seen; while many species, as if to avoid the crows, build their nests among the trees and shrubbery near dwellings, both in the village and country, where the crows dare not come. The birds' eggs and young birds destroyed by crows, would, if suffered to live, do vastly more good in the destruction of worms and insects, than crows, besides enlivening the country with their presence, and cheering it with their songs. The crows have not a redeeming quality that renders them entitled to be saved. They are almost universally obnoxious to the agricultural community, and various are the methods employed to destroy them. They know enough to avoid the marksman, and are rarely shot. The most effectual way to destroy them, is to steep corn in hellebore or strychnine, and strew it around some dead carcass in the winter season. The carcass should be in some field or woods, out of the way of domestic fowls or animals. The late severe winter propably destroyed many crows, since they are less numerous than usual this spring.

The American crow has been supposed to be identical with the common carrion crow of Europe, but it is now considered by ornithologists to be different, from its smaller size, shape of its tongue, gregarious habits and voice. It is also much more timid and fearful of man. Nuttall says that the European crow is so familiar and audacious in some parts of the Levant, that it will frequent the courts of houses and like a harpy alight boldly on the dishes, as the servants are carrying in the dinner, and carry off the meat, if not driven away by blows. S. B. Buckley. *West Dresden, Yates Co., N. Y., May*, 1849.

Catching Red Squirrels.

Eds. Cultivator—There have been in *The Cultivator*, several modes recommended for the destruction of rats and mice—those vexatious destroyers of the farmers' grain; but nothing has been said, with regard to the destruction of *red squirrels*, which find their way into the corn crib, however securely it may be guarded against the entrance of rats and mice. Every one who is acquainted with these little marauders, knows too well how readily he will gnaw a hole through the barn roof, or into the granary; and how frequently is it the case that they enter the domicil of the farmer and plunder the precious fruits, "which autumn richly pours"—chestnuts, hickory nuts, butternuts, &c , which had been safely stored for use. during the long and pleasant evenings of winter. Where they are so numerous as they have been in this region the past few seasons, their destruction is an object, as worthy the attention of the farmer, as the destruction of any other animal, which wastes and destroys the fruits of the farmer's industry. One red squirrel, permitted to live about a barn, or corn crib, will destroy more grain than two rats; besides the injury they are liable to do to the building by gnawing holes in the roof or the ceiling. As they are always so quick and shy in committing their depredations, and as we cannot always avail ourselves of an opportunity of demolishing them with "*Mexican grape*," and as they are not readily caught in common traps, I have practiced a more expeditious and *funny* mode of capturing them—which will be sport for boys.

Unlike the black and the gray squirrels, which seldom or never seek a refuge in a hole in the rails of a fence, when pursued, the red squirrel searches out all such hiding places in the fences where he is accustomed to run—as if to seek places of safety and concealment, when pursued by the sportsman. Although they are bold in approaching places, where the black and the gray squirrel dare not make their appearance, still they are exceedingly suspicious and shy of anything which has the appearance of a trap. Taking advantage of their remarkable propensity to run into holes, I lay a pump-log, or a bark which has rolled together, or anything which has a hole in it large enough for them to enter, upon the fence; and as the dog or anything else chases them along, they will take refuge in this *trap*. Then if I wish to take them alive, I hold a bag over one end, and punch them out with a pole. Sportsman.

Preservation of Grain.

The report on the Breadstuffs of the United States, made to the Commissioner of Patents, by Lewis C. Beck, M. D., contains many facts worthy of special attention. The remarks in regard to the preservation of grain, exhibit in a striking light, the necessity and advantage of adopting some artificial mode of drying. The losses which are sustained from the souring of flour, and the chemical changes in breadstuffs. by internal moisture, is estimated at from $3,000,000 to $5,000,000 annually. The practice of shipping grain in bulk is considered the cause of much injury.

The remedy proposed, is the removal of a portion of the water naturally contained in flour and grain. But the process of drying requires great care. In regard to ordinary kiln drying, it is observed:—"The passage of the grain or flour, however rapidly, over highly heated surfaces is apt to scorch, and thus give them an unpleasant flavor. From the rapid evolution of the moisture in the form of steam by the heat thus applied, unless proper ventilation be also secured, further injury will probably result. The steam again condensing into water, upon the cooling of the flour, may accumulate in particular parts of the mass operated on, and, thus, perhaps, render it at least equally liable to injury as it would have been without the employment of this process."

The report further observes that "in those samples of wheat flour that have been exposed to a degree of heat high enough to expel all the water, the gluten is less tough and elastic—a proof that its quality has been impaired. It is probable that the proportions of dextrine and glucose may thus also be increased at the expense of the starch. Under these circumstances, a subsequent exposure to moisture and a slight elevation of temperature, establishes the lactic acid fermentation, which, I suppose, is the chief cause of the souring of flour."

Mr. J. R. Stafford's process of steam-drying, of which we have several times spoken, is thus noticed:

"The advantages to be derived from artificial drying, are more fully attained by the invention patented by Mr. J. R. Stafford, in 1847, than by any other plan with which I am acquainted. It is based upon the process for drying organic bodies usually *adopted in the laboratory*. The grain or flour is brought into contact with a surface of metal heated by steam, and a due degree of ventilation, so important to the completion of the drying, is secured. As the heat is not raised above that of boiling water, there is no danger of injuring the quality, color, or flavor of the substances subjected to its action. The heat is, moreover, uniform, and the expense is said to be less than that of the mode of drying heretofore generally adopted. By Mr. Stafford's apparatus, 16 or 17 pounds of water are expelled from each barrel of flour; this reduces the proportion of water to four or five per cent., an amount too small to be productive of injury. Absolute dryness cannot be easily attained except by a long exposure of the flour to the heat, and it is not required for its preservation; a reduction of the amount of water to the small per centage just stated, has been found to be amply sufficient to secure this object. I cannot, in my opinion, render a more important service to dealers in breadstuffs, than to recommend strongly the employment of this or a similar process of drying."

The grain and flour should be packed in clean and tight barrels, and kept without unnecessary exposure to the air.

Since the above was put in type, we have received a letter from Mr. Stafford, stating that during the past year there have been but few shipments to England, of meal dried by his process, and none of corn: that Messrs.

Allen & Whittlesy, and Messrs. Gibson, Shotwell & Co., of New-York. have made some shipments of meal, and that the parcels have brought from one shilling to wo shillings more per barrel than any other dried meal in market. Mr. S. further states that the reaon why there has not been more meal sent abroad, is, hat the home and Canada demand has been so great as o take all that has been made by the machines now in operation. Much of that which has gone to Canada, s said to have found its way to the West Indies and South America. Mr. S. says the price of the meal ent to New-York has been from two to three shillings per barrel more than the Jersey or Brandywine meal.

English Turneps.

It has been a Yankee maxim, from the days of the Pilgrim fathers, that—"turneps should be sown on the 25th of July, let the weather be wet or dry." The common English flat turnep will usually do well, if sown on proper soil, any time from the 20th of July to he 10th of August. They may not yield so largely as when sown somewhat earlier, but the roots will be sweeter, and will keep better.

The white turnep is not a very nutritive vegetable; but as it may be grown on lands from which a crop of hay or grain has been taken, the same season—is a good *fallow* crop, leaving the ground in good condiion—and is useful in feeding sheep, cows or young stock, in the early part of winter, it may be made a profitable crop, in many instances. The grass or grain stubble may be plowed in, and a dressing of fine manure, compost or ashes, spread and harrowed in. The seed may be sown with a seed-drill,—the quantity vaying from one pound to two pounds per acre. If the seed vegetates well, and the young plants are not atacked by insects, a pound to the acre will give a "good stand"—the rows being twenty inches apart,—but there is more certainty in the use of a greater quantity, and to guard against emergencies, it is better o use plenty of seed. After the plants have got well nto "rough leaf," and are secure from injury by the ly, they should be thinned to the distance of six to eight nches in the rows; and the ground should be kept clean by the harrow, cultivator and hoe.

Cement for Cellars.

Eds. Cultivator—A cellar may be made dry without draining, by means of *good* masonry; that is, if both materials and workmanship are of the best kinds or that purpose. The excavation being made to any epth required, and wide enough to allow the walls to e faced on both sides, let the foundation be laid with t least six inches of concrete, in two layers of three nches each; the first left to *set*, so as not to be easily isturbed before laying the second.

The concrete to be made as follows: Take any kind f sound durable stone, and break it as is done for McAdamised roads; the largest pieces to be no larger han a pullet's egg, and the smallest the size of an corn. Take, also, of the best water lime, or cement, ne part, and of sharp sand, perfectly free from mud r loam, three parts, and in a tight mortar box, withut water, incorporate thoroughly the cement and sand, ntil every grain of the sand be separately rolled in he cement. Then add water to make it mortar, which must be thoroughly tempered, so that if it be kept to tand a while, no water shall collect in any depression left on the surface of the heap, which is the best test, perhaps, of its being sufficiently worked, while at the ame time it is sufficiently moist to be pliant with the rowel.

The broken stone is now to be mixed with the morar, in such quantity as will leave each piece of stone fairly embedded in the mortar, and as much stone as possible with that provision. It is then with dispatch to be laid down in the foundation, as already directed, and of such width as to project a little on each side of the thickness of the wall, and, of course, around the whole cellar.

The floor will be of the same material, and is to be done in the same way, the whole of each layer to be well beaten down and compacted with the back of a shovel; and, at last, all to be finished with a thin coat of the cement mortar. The floor, however, need not be laid until all the other work is complete. On the foundation, as described, the walls are to be built, with equal care, of stones and mortar, made of one part of cement and three of sand. Every crevice must be perfectly filled with mortar, and the stones so completely bedded and pointed as that no one piece may touch another.

As Mr. Johnston says about draining, the true way to go about this kind of work, is to go at it as though it was to "cost nothing," and there will be satisfaction in the end.

In making the concrete, the broken stone should be perfectly free from dust and dirt of every kind; and unless it is clean, should be washed. If inland sand is quite clean, it is better than lake sand,—the latter being rounded by the rubbing of the particles against each other, caused by the motion of the water.

There should be no quick-lime used; it has a tendency to slack longer than people think for, and prevents the cohesion of the cement.

Frost will not injure it if once fairly set; but that also requires time, and it should be protected by some nonconducting substance on the ground, and as high as the walls outside, for at least one winter; and the work should be all completed before the frost comes.

Very good cement can be had in Buffalo. I do not remember the maker's name, but I think the place was called Avon; and I think the merchant was Daw. It cost $1.75 per barrel some years ago. W. S. *Ellicottville, May* 25, 1849.

Wire Fences.

Eds. Cultivator—I was much interested with a late article in your excellent journal from H. V. L., on the subject of Wire fence. There are many who, like myself have never seen such a fence, and would like a little further information. What is the mode of fastening the wires at the end of the fence? What means are used to tighten the wires, and is there not danger of their breaking in winter from the effects of frost, unless they are loosened? Boring holes in the posts, while it is attended with considerable labor, must tend to weaken them, if not to hasten their decay.

Why might not small staples driven into the posts to confine the wires, answer well instead of holes?

Would wires 5 inches apart, and 20 feet between posts, make an efficient *sheep* fence? If not, why might not smaller wires (say No. 16) be placed between the larger ones. Will those who understand these matters, be so kind as to give us a little "more light." S. W.

Sheltering Sheep.

Eds. Cultivator—Permit me to call the attention of farmers in Ohio and other sections of the country, to the importance of providing shelter for sheep and other domestic animals. I have had some experience in keeping sheep at stacks, exposed to the drizzling rains and sudden changes of the weather during the winter season. In the winter of 1847—8, I put one hundred to stack, and gave them plenty of hay and some grain through the winter. The loss was over 20 per cent. I have no doubt they ate a fourth more than the same number that were protected, of which the loss was only two per cent. In consequence of this result, I built ample sheds during the past summer, provided with hay-lofts—one 60 by 20, and another 55 by 20 feet. (I will just observe for the benefit of those who are building sheds of this kind, that 24 feet is about the proper width, and the additional expense of four feet is trifling.) These sheds are set to two barns, and enclose the yard on three sides. Here, in separate divisions, I have kept my sheep the past winter. They had good hay and plenty of water, and the yards were strawed three times a week. I feed some grain to my lambs in winter, and give some to ewes in spring. My loss up to this time (April 15th,) is half of one per cent. Many of my sheep were in low condition in the fall, yet I would like to compare them with any flock of the same number, that have had no protection. E. Halley. *Cleveland, Ohio, April,* 1849.

Legislative Aid to Agriculture.

Eds. Cultivator—I wish to make some inquiry in regard to the money raised by the legislature for distribution to agricultural societies. I am informed by our late representative, that the money designed for counties which have no organized agricultural society, still lies in the State treasury. I find by referring to the *Transactions* of the State Society for 1847, that there were but forty-one county reports; and it is probable many of these societies were not organized for several years after the appropriations were made. It appears to me that some legislative action should be taken at an early day, in reference to this matter. In relation to those counties where there are no organised agricultural societies, and where the people are unwilling to organize, it seems to me that there would be nothing wrong in taking their quota of the money which now lies idle, or is used for other purposes, and distribute it among the counties where there are such societies. I have no doubt that this course would cause the formation of societies in several counties, and would be the means of doing much good. Lotan Smith. *Fallsburgh, N. Y., May,* 1849.

Agricultural Chemistry.

We have been furnished by Mr. J. H. Salisbury with the following account, prepared by him for the *Transactions* of the New-York State Agricultural Society, of some investigations connected with the composition of the tomato, and the fruit of the egg-plant. These investigations are interesting from being mostly in a new field, and as relating to substances which are coming more or less into use as edibles.—Eds.

The tomato and the egg-plant belong to the order Solanacea—the *potato tribe*. The properties of many of the plants of this order are very interesting and important. Many of its families contain a powerful narcotic principle, which renders the herbage, and generally the fruit, very poisonous. A number of these bodies are among the most active medicines: as *belladona, henbane, stramoninm,* &c.

Among the species of the Solanum family, a number are cultivated for the palatable and nutricious food which some parts of the plant furnish, while others are highly valued as furnishing some active principles used in medicine. Those of the former class most highly esteemed, are the potato, tomato, and egg-plant.

The part of the plant eaten, when mature, is generally free from any deleterious qualities; although the herbage of the potato plant, and especially the young sprouts, contain a poisonous body,—a vegetable alkali called solania. The herbage of the tomato and egg-plant probably are also pervaded by a poisonous principle, though I do not know as this has as yet been actually demonstrated.

Tomato or Love Apple.—(*Solanum lycopersicum.*) This, like the potato, grows wild in South America, and is supposed to be indigenous to that country. It was introduced into notice in 1796, soon after the potato It has been cultivated and used for a long time in Europe, and for some time in the southern states; yet its introduction into the northern and eastern states is of a comparatively recent date. The extent to which it is now cultivated is sufficient evidence of the high esteem in which it is held. Of the numerous forms in which it is used, it is quite unnecessary here to speak.

There are two distinct varieties in cultivation, the *red-fruited* and the *yellow-fruited*. Of each of these there are several sub-varieties, the principal of which are: Of the red—the *common large-lobed*. the *small*, the *pear-shaped*, and the *cherry-shaped*; of the *yellow*—the *large-yellow*, the *small*, the *pear-shaped*, and the *cherry-shaped*.

The fruit of one of the red sorts was examined by M. M. Fodere and Hecht,* who give the following bodies as the result of their investigation:

1. An acid seemingly peculiar. It is destroyed by distilling heat. In the berries, it is probably combined with a bitter matter, thought to be solania.

2. A volatile oil, difficult to separate, and which evaporates with great rapidity.

3. An extracto-resinous brown matter, of a pitchy consistency, having a strong smell, a bitter-sweet taste, soluble in water, and partly soluble in alcohol and ether.

4. An albuminous matter, which readily putrifies.

5. A little mucous sugar. detected by the smell of caromel at the commencement of combustion.

6. Sulphate of potash, a little chloride of potassium and calcium, pure potash, and probably a vegetable alkaloid, which resides much more abundantly in the leaves of the plant.

This examination was made some years ago, when the methods of analysis were less perfect than at present. If solania exists in the berries, its amount must be very small, as the raw fruit is often eaten in large quantities without any bad results; *in fact, the effects* are considered beneficial rather than *otherwise*.

The kind here examined was a very fine seedling from the *large red*, raised and furnished by Mr. Rathbone, of Kenwood, Albany. The fruit only was analysed.

Percentage of water, dry matter and ash.

335.8 grains of the fresh fruit gave, of

		Per centum
Water,	318.20	94.758
Dry matter,	17.60	5.242
Ash,	1.12	0.334
Ash calculated on the dry matter,	....	6.372

The above shows that there is but little over 5 per cent. of dry matter, and 94 per cent. of water, in the fruit. The ash is highly deliquescent.

Composition of the ash.

Carbonic acid,	11.050
Silicic acid,	1.775
Sulphuric acid,	1.790
Phosphoric acid and peroxide of iron,	24.075
Lime,	0.075
Magnesia,	1.610
Potash,	20.[illegible]
Soda,	25.535
Sodium,	2.790
Chlorine,	4.245

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* Journal de Pharmacie, xviii, 106

rganic acid,	4.550
	98.250

The phosphoric acid, potash and soda, make up about) per cent. of the ash.

Proximate organic composition.

		Calculated without the water
ıgar and extract, with tartaric, citric and malic acids,	3.320	59.064
lbumen,	0.210	3.736
asein,	0.207	3.682
extrine or gum,	0.547	9.732
ibre, with the coloring matter,	1.010	17.968
atter separated from the fibre by a weak solution of potash,	0.327	5.818
	5.621	100.000
'ater,	94.758	
	100.379	

Besides the bodies given in the above analysis, it conins a small quantity of volatile oil.

The matter separated from the fibre by a weak soluon of caustic potash, gave the characteristic color of bumen with sulphuric acid. Three acids were noticed the tomato, which resemble tartaric, citric and malic. ıese acids were not quantitatively determined. From e qualitative examination, the citric acid appeared to ist in the largest proportion. This investigation was mmenced so late in the season, that it was impossible get good fruit enough to extend the inquiry as far as would have been desirable. The subject will be remed at the earliest opportunity, for the purpose of amining more fully these acids and the coloring matr.

nount of the several bodies, organic and inorganic, in 1000 lbs. of fresh tomatoes. Calculated from the foregoing analysis.

	Expressed in lbs. and decimals of a lb.
ırbonic acid,	0.3817
icic acid,	0.0606
osphoric acid and peroxide of iron,	0.8401
lphuric acid,	0.0611
me,	0.0026
agnesia,	0.0549
tash,	0.7191
da,	0.8899
dium,	0.0952
lorine,	0.1472
ganic acids,	0.1576
Amount of ash in 1000 lbs.,	3.4100
gar and extract, with tartaric, citric and nalic acids,	28.9480
bumen,	1.8310
sein,	1.8050
xtrine or gum,	4.7690
re with coloring matter,	8.8060
atter separated from fibre by a weak soution of potash,	2.8510
Proximate organic bodies in 1000 lbs.,	49.0100
ter,	947.5800
Total,	1000.lbs.

Egg Plant.—*Solanum melongena.*—The egg plant native of Africa. It was introduced into Europe in 7, soon after the tomato. It is a tender annual, uiring a warmer and longer season to mature in than plant previously described. It is highly esteemed the general purposes to which the tomato is applied; it is less cultivated than that plant in the Northern Eastern States, owing probably in part to the short that has elapsed since it was first brought into general notice in this section, and in part to the difficulties attending its cultivation.

The varieties generally grown are the *oval-shaped purple*, the *globular-shaped purple*, the *oval-shaped white*, and the *globular-shaped white*.

The only part of the plant analysed was the fruit, which was a fine specimen of the *oval-shaped purple*, raised and furnished by Mr. Rathbone, of Kenwood, Albany. Its longitudinal diameter was ten inches, and its transverse diameter six inches. It was in the proper state for cooking.

Percentage of water, dry matter, and ash.

275 grains gave of

		Per centum.
Water,	251.22	91.353
Dry matter,	23.78	8.647
Ash,	1.66	0.604
Percentage of ash calculated on the dry matter,		6.981

Composition of the ash.

Carbonic acid,	4.725
Silicic acid,	1.700
Sulphuric acid,	4.740
Phosphoric acid and peroxide of iron,	28.775
Lime,	0.075
Magnesia,	1.370
Potash,	20.510
Soda,	31.970
Sodium,	1.135
Chlorine,	1.730
Organic acids,	2.200
	98.930

Water constitutes a large proportion of the fruit,—about 91 per cent. The percentage of ash calculated on the dry matter, does not differ materially from that of the tomato. The ash of the fruit of this plant, like the ash of the fruit of the plant previously described, is made up principally of the phosphates of the alkalies; or of phosphoric acid, potash and soda. These three bodies constitute about 81 per cent. of its inorganic matter. It is more rich in phosphoric and sulphuric acids and soda, and less rich in chlorine than the tomato.

Proximate organic analysis.

	With the water.	Without the water.
Sweet matter and extract, with a peculiar bitter principle,	3.040	50.964
Starch with a little fibre,	0.365	6.119
Albumen,	0.255	4.275
Casein,	0.200	3.353
Dextrine or gum,	0.370	6.203
Fibre,	0.760	12.741
Matter separated from the fibre by a weak solution of caustic potash,	0.975	16.345
		100.000
Water,	91.350	
	97.318	

The fruit, when dry, has a peculiar honey odor. It contains, besides the bodies given in the foregoing analysis, a small quantity of an oil which is volatile, ard a little wax which is mostly spread over the outside of the fruit, imparting to its surface a greasy feel. The bitter principle which was obtained with the sugar and extract, can be slightly tasted in the fresh fruit.

About 50 per cent of its dry matter is sugar and extract. The dried fruit has a decided odor of honey, and a pleasant, sweet taste. The matter separated from the fibre by a weak solution of caustic potash, resembles albumen. The loss in the above analysis is owing in part to the oil and part to the bitter principle, which were volatilised.

Amount of the several bodies, organic and inorganic, in 1000 *lbs. of the fresh fruit. Calculated from the foregoing analyses.*

	Expressed in lbs. and decimals of a lb.
Carbonic acid,	0.2889
Silicic acid,	0.1038
Sulphuric acid,	0.2898
Phosphoric acid and peroxide of iron,	1.7595
Lime,	0.0046
Magnesia,	0.0828
Potash,	1.2496
Soda,	1.9525
Sodium,	0.0686
Chlorine,	0.1057
Organic acids,	0.1341
Amount of ash in 1000 lbs,	6.0400
Sweet matter and extract,	40.9900
Starch with a little fibre,	4.9220
Albumen,	3.4383
Casein,	2.6967
Dextrine or gum,	4.9889
Fibre,	10.2476
Matter separated from the fibre by a weak solution of potash, resembles albumen,	13.1465
Amount of proximate principles in 1000 lbs.,	80.4300
Water in 1000 lbs.,	913.5300
Total,	1000 lbs.

About 86.3 lbs. in the thousand is solid matter: of this 6 lbs are made up of inorganic and the rest of organic matter This calculation was made to show the real or actual composition of the fruit.

Insect in Cherry Trees.

EDS. CULTIVATOR—Enclosed is a section of the trunk of a cherry tree five or six years old, containing an insect in its various stages, from the egg to the perfect insect, of whose name and history I am not acquainted; but which has proved fatal to one of my trees, and from their numbers in this, may prove so to more, if a remedy cannot be found. My attention was called to the tree soon after the opening of the leaf buds, from their withering up, as though seared by fire or frost—the latter of which I supposed to be the cause; but on examining the tree closely, I discovered small perforations through the bark, and penetrating the wood, as may be seen in the section enclosed. The insect appears to be a stranger in this section, nor can I find any account of it in any work in my possession. Its history, if known, may be of use not only to myself, but to many of the readers of "The Cultivator." WILLIAM WANZER. *New-Milford, Litchfield co., Ct.,* 11*th of* 6*th mo.* '49.

The insect above described is a beetle evidently belonging to the family *Bostrichidæ*. It closely resembles the species described by KOLLAR as the *Bostrichus dispar* (*Apate dispar* of some naturalists)—and may be identical. If so it has probably been imported in trees. It is very destructive when it becomes numerous; as two or more generations are produced in a season, and the tree is bored in every direction; and though the holes are not larger than would be made with a common knitting-needle, the effect is to derange the circulation of the sap; the health of the tree is soon impaired, and its life finally destroyed. As to a remedy, Kollar observes—"With respect to the destruction of these insects, their history shows, that the only way is to cut off the branches that are infected, and should the trunk be also attacked, the whole tree must be cut down, and conveyed out of the orchard; which need not be regretted as it would soon die of itself." EDS.

Test for Good Limestone.

The best lime for agricultural purposes is that which is lightest, whitest, and softest to the touch; the purest and strongest lime is always found the lightest. If then by calcination limestone loses much of its weight by the process; if the lime-shells are extremely light, and require, for slaking them fully, a large portion of water; if they are a considerable time before they begin to fall; if, during the process of burning, the limestone is not disposed to run or become vitrified; if it increases very much in bulk by slaking, and the lime is of a pure white, and fine and light to the touch, it may be set down as very good, and should be used in preference to other lime not possessing the same qualities. —*English Paper*.

DUNG OF POULTRY.—Pigeons' dung is of a very powerful nature, but hot and stimulating, and abounds with the volatile alkaline principle. It contains uric acid, and gives by distillation carbonate of ammonia—yields subtle matter in water, and is very liable to ferment. It also possesses an acid of a very peculiar nature, which increases when the matter is diluted with water, but gradually gives place to ammonia, which is at last abundantly exhaled. It affords carbonate of ammonia, and leaves as a residuum carbonate of lime and saline matter, chiefly common salt. It should be applied fresh, as fermentation diminishes the quantity of soluble matter. The dung of poultry contains silica, and phosphate and carbonate of lime; and, along with the dung of pigeons, has been dried, broken down and powdered, and mixed with earthy substances, and applied during moist weather, and covered by harrowing of the seed, at the rate of forty or fifty bushels an acre. If used fresh, the quantity must be small; but as a very small quantity of such excrements will come into the possession of the farmer, the readiest and probably the most economical application will be to spread it evenly on the top of a dung heap, just before its being turned over, which will mix the substances, and extend the benefits equally. The excrements of animals, as birds, dogs, swine, poultry and pigeons, that eat food of nature and preparation similar to that of man, is of much better quality as a manure than that of those animals, as cows and horses, that are *fed* with grass and cooked food: but the difference *may be* partially owing to the constitutional structure of the animal, and the nature of the digestive organs.—*Eng. Farmers' Herald*.

GLASS VARNISH.—The *Maine Farmer* states that a kind of soluble glass may be made, which, being applied to wood, will render it fire-proof. Take fifteen parts of powdered flint or quartz rock, ten of potash, and one of charcoal. These are melted together, then worked in cold water, then boiled with five parts of water, in which it will dissolve. It may then be applied to wood work or any other substance. As it cools it gelatinizes and dries into a transparent varnish or glass, and the substance thus becomes coated in such a way as to render it incombustible. The editor adds that he has never tried the experiment himself, but that it would not be difficult or expensive to give it a trial.

COFFEE A DISINFECTANT.—It is said that the *odor of roasting coffee* is a most powerful disinfecting agent. Take a red hot shovel with a few kernels of coffee upon it, and it will remove entirely the most offensive odor arising from decaying animal or vegetable matter, or from any other source; a fact worth knowing where the cholera prevails. A friend of ours assures us that he has tried the article as recommended and it answers the purpose effectually.

Notices of New Publications.

EUROPEAN LIFE AND MANNERS; IN FAMILIAR LETTERS TO FRIENDS. By HENRY COLMAN, author of European Agriculture, and the Agriculture of France, Belgium, Holland and Switzerland. In two volumes. Published by CHAS. C. LITTLE and JAMES BROWN, Boston.

The author of these volumes is extensively known to the American public through his various writings on agriculture, particularly his large and popular work entitled "European Agriculture and Rural Economy." The work before us may be said to constitute his personal narrative during his residence abroad. The letters were not originally designed for publication; but appear in the present form at the solicitation of Mr. Colman's friends, to whom they were all addressed. Mr. C. enjoyed peculiar facilities, from the society to which he was introduced in Europe, of making himself acquainted with "life and manners," in all their phases, and a person of his habit of observation and faculty of delineation could not fail of making interesting and truthful sketches. That the descriptions are *interesting*, we can, for ourselves, affirm, having perused them with great satisfaction; and on the credibility of the witness, we have the fullest confidence in their truthfulness. We recommend the Letters as giving an insight into the condition of European society and manners, not often to be obtained from books or even by personal observation.

BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW, or Quarterly Journal of Practical Medicine and Surgery.

This valuable foreign work, is re-published in New-York, by Messrs. G. & R. S. WOOD, and is afforded at three dollars a year. No person engaged in the practice of the "healing art" should be without it.

PLOW, LOOM AND ANVIL.—A prospectus for the second volume of this periodical will be found in this number. The senior editor, J. S. SKINNER, Esq., is to be sole conductor of the work for the present; his son, Mr. F. G. SKINNER, having received the appointment of Collector of Agricultural Statistics, in the Home Department, has withdrawn from editorial charge of the P., L. & A. We presume the work will be continued with no abatement of the interest and spirit which it has heretofore exhibited. Its present editor has been engaged in conducting agricultural journals for thirty years, and is well known throughout the whole country.

Eaton's Agricultural Chemistry.

EDS. CULTIVATOR—Be pleased to allow me the use of an odd corner in *The Cultivator*, that I may introduce to your readers a new work, which will be found to possess great practical value by those willing to examine it. Its title is "A Text Book on Agricultural Chemistry, for the use of Academies, Schools and Agriculturists: comprising that portion of elementary chemistry which is necessary to a full understanding of the changes connected with vegetable organization, and an examination of the different manures, soils, crops, &c., compiled in part from the writings of Petzholdt, Johnston. Liebig, and others."

The author of this work, Mr. A. K. EATON, is a graduate of Hamilton College, and by profession, a teacher. Since his graduation, he has devoted himself, with untiring industry and perseverance, to studies and pursuits in natural science, which have fitted him for successful authorship in his chosen department. He is not a mere theorizer; nor can it be justly said of his book, that it was "edited by a pair of scissors." Although following in the track of the eminent authors mentioned in his title-page, he has received nothing upon trust, but has carefully subjected the principles laid down by them to the test of his own experiments. These experiments and principles he has set forth in language free from unexplained technicalities, and easy to be understood. The result is, a treatise eminently practical, and sufficiently extensive for ordinary purposes. It is published by H. H. Hawley & Co., of Utica. E. N.

Answers to Correspondents.

GYPSUM.—"A FARMER'S BOY," Westchester county, N. Y. Gypsum is a compound of lime and sulphuric acid. Both lime and sulphur are taken up more or less, as constituent elements of plants. Of course they are "soluble." Gypsum may, no doubt, prevent the escape of gases arising from manure; ammonia, being an alkali, will combine with the acid of the gypsum, and is thus *fixed*. Get Prof. Norton's edition of *Johnson's Catechism of Agriculture*, which is to be had at most book-stores in New-York and Albany.

TIME TO SET OUT CEDAR TREES.—G. L. S., Rutherford county, N. C. Spring is considered the most favorable season. If the trees are not too large, and the work is done carefully, they generally live.

"OUGHT SUCKERS TO BE TAKEN FROM CORN?" We do not think this question has been fairly settled. Probably much depends on the kind of corn. With our northern varieties, the suckers will frequently bear ears, especially if the main stalks are rather thin. But the southern corn seldom produces ears on the suckers, and hence it is argued that the suckers only draw nourishment from the productive stalks. We would advise that you make an experiment by cutting or pulling out the suckers in alternate rows through a field, and measure the product separately.

GRASS LAND.—See an article on this subject in this number.

We have no knowledge of "Robinson's drying machine," farther than that given in our May No. In reference to the other inquiries of G. L. S., will give an article in our next.

Agricultural Shows.

NEW-YORK STATE SOCIETY.—At Syracuse, 12th, 13th and 14th of September.

SENECA COUNTY, N. Y.—At Ovid, 4th and 5th of October.

WASHINGTON COUNTY, N. Y.—At Whitehall, 19th and 20th of September.

SARATOGA COUNTY, N. Y.—At Mechanicsville, 11th and 12th September.

RENSSELAER COUNTY, N. Y.—At Troy, 25th, 26th, and 27th September.

DELAWARE COUNTY, N. Y.—At Delhi, 3d October.

JEFFERSON COUNTY, N. Y.—At Watertown, 26th and 27th of September.

WORCESTER COUNTY, MASS.—At Worcester, 20th of September.

MIDDLESEX COUNTY, (Mass.)—At Concord, Oct. 3.

NEW-HAVEN COUNTY (CT.) AG. AND HORT. SOCIETY.—Exhibition at New-Haven, 25th, 26th, and 27th.

CRANBERRIES.—The *Massachusetts Plowman* states that cranberry meadows are much improved by covering them with poor sand—the poorer the better—for if manure or good loam is applied, the growth of grass is encouraged and proves injurious to the cranberry. Sand may be spread on in winter, in the spring, or soon after the cranberries are gathered. Flooding the ground in winter—the water to be on till May, is beneficial.

Notes for the Month.

Communications have come to hand since our last, from F. Holbrook, S. B. Rockwell, L. Durand, James Avery, S. W., J. D. Romington, Lotan Smith, P., A Virginian, W. S., S. Austin, A Farmer's Boy, Agricola, J. R. Stafford, G. L. Simmons, W. L. F., J. P. S.. I. Hildreth.

Books, Pamphlets, &c., have been received since our last as follows:—European Life and Manners, by Henry Colman, 2 vols., from the publishers, Little & Brown, Boston—Report on the Breadstuffs of the United States, by Lewis C. Beck, M. D., from the author —Allen's American Farm Book, new edition, from the publisher, C. M. Saxton, New-York.—A Text-Book on Agricultural Chemistry, by A. K. Eaton, from the author.

☞ The communication "To Western Wool-Growers," from Portage county, Ohio, is deemed too extravagant in its statements to be useful to the public.

Victoria Rhubarb.—We received from Mr. James Wilson, of this city, a parcel of this variety of *pie-plant*, and after a fair trial, we think it decidedly the best we have ever tasted. The stalks are large,—though not so *long* as some kinds,—and the pulp is tender, free from fibre, and so pleasant an acid that it was preferred for tarts and pies to any other article to be obtained at that season of the year.

Profitable Swine.—S. Huston, Esq., of Coxsackie, informs us that Mr. M. Hallock, of that town, has a sow which raised forty pigs within the year 1848, which sold for $275,—none of them being kept over nine months. The same sow has now fifteen fine pigs.

Malt-dust or "Sprouts."—Barley, in undergoing the process of malting, sprouts, and after the grain or malt is dried, the rootlets are rubbed off. One hundred bushels of barley are said to yield four or five bushels of this dust. It is a very powerful manure, and is used in England as top-dressing to different crops. It is sometimes used in forming composts. Owing to the large proportion of nitrogen it contains, its tendency to fermentation is great; and on this account it is valuable to mix with peat or coarse vegetable matters. A small quantity of the dust, say four bushels to a common cart-load of peat, laid up in layers with the peat, will soon reduce it to good manure. A handful of this dust to a hill of Indian corn, is a strong stimulant to growth.

Special Premium on Sheep.—A gentleman in Connecticut has offered the sum of $100, to be awarded as a premium on Merino sheep at the coming Fair at Syracuse. The requisitions specify that the sum shall be paid—"for the best twenty-five full blood Merino ewes over one year old, and for the best twenty-five full blood Merino lambs, *less* than one year of age, all to be owned by one person. They must not be from any Saxon cross, and must have been shorn within the present year. Regard being had to size and constitution, with quantity and quality of wool. The stake open to the whole country." The judges selected to award this premium, are J. G. Strean, Washington, Pa.; Francis Rotch, Butternuts, N. Y.; J. D. Patterson, Westfield, N. Y.; A. C. Russell, Kirtland, Ohio; L. G. Bingham, Williston, Vermont.

Early lambs may be taken from the ewes this month, and turned into good, sweet, but not very long feed. They should be kept out of the sight and hearing of their dams, till they are weaned. Both the lambs and ewes will thus be much more quiet, and will become reconciled to their separation much sooner, than if they were within the sound of each other's voices.

Salting Hay.—The practice of salting hay for the purpose of *curing* it, or salting it for the purpose of *making it weigh better*, as is sometimes done when damaged or cheap salt can be obtained,—we think is improper. As a general rule, it is best to allow animals what salt they will eat *voluntarily*, rather than to force them to eat more than they want. It may do to salt a load of hay that has been injured, or which is of inferior quality, to be fed to stock occasionally, as a condiment.

Fallows should be kept perfectly clean. The great object is to clear the ground from foul plants; hence, the cultivator, the harrow, or the plow, according to state of the soil, should be used so often that the weeds cannot grow. This operation also keeps the ground well pulverised, opening it to the decomposing influences of the air, which is of great advantage on tenaceous soils, bringing the mineral elements into a soluble state.

Materials for Manure.—When the labors of haying and harvesting are interrupted by cloudy weather, men and teams may be turned to good account in digging and carting muck, marl, or the coarse grasses of bogs, to the barn-yard. Or these articles may be piled up to be used as wanted. Peat is much better for being exposed to the action of frost, which tends to dissipate the acid and render it fine.

Laborers.—We invite attention to the advertisement of the Commissioners of Emigration, in the present number, in reference to the facilities they offer for supplying laborers in agriculture and other branches of industry. We have known several instances where farm laborers have been procured through this agency, and the persons gave good satisfaction to their employers. An institution of this kind, properly managed, cannot but be useful to the country.

Mr. Vail's Sale of Short Horns.—We expected to have obtained for this number, a list of the animals sold and the prices obtained at this sale. Not having received such a list, we are only enabled to give the following facts, from a letter received from Mr. Vail. Twenty of the animals in the catalogue were sold, and brought the aggregate sum of $2015; *four calves from* three to seven weeks old, (not *in* the catalogue.) brought $142.50; those over a year old, averaging $100.75 each. The purchasers were as follows:

Dr. Niles, Washington county, N. Y., one cow

H. Drinker, Wm. Jessup and Thomas Nicholson, of Montrose, Susquehannah county, Pa., two cows and one bull.

H. B. Burgwyn, Halifax, North Carolina, three heifers and two bulls.

Benjamin Jean, Carthage, Jefferson county, N. Y.. one heifer and one bull.

Mr. Ogden, for the Quebec Agricultural Society, one heifer.

P. L. Holton, Vermont, one bull.

D. D. Campbell, Schenectady, N. Y., one heifer and one bull.

S. Percivall, Waterville, Me., one bull.

Thomas Hillhouse, Watervliet, N. Y., one bull.

Mr. Starkweather, Boston, one heifer and one bull

H. Harrington, Troy, N. Y., one bull.

T. P. Remington, Philadelphia, Pa., one bull.

Canada Thistles in grass-lands should be cut close to the ground, while they are in blossom and before any of them have formed seed. They may start more or less, and should be again cut the latter part of the season—making it an invariable rule that none of them shall go to seed. This mode strictly pursued, will generally eradicate them, especially if the growth of grass is so encouraged that a close sward is formed. In cultivated fields, successive and thorough plowings, or working the ground with a cultivator with very sharp teeth, will destroy them. But to do this the top must not be allowed to grow. The leaves of a plant are its breathing organs, and no plant can live long without them. Deprive it of these, and the root must die, however deep it may run into the ground, or whatever may be its tenacity of life under other circumstances.

Western Virginia.—In our May number we gave an inquiry in relation to the country "between the White Ridge and Allegany mountains" in Virginia. In reference to this inquiry, Mr. T. B. McRobert, of Williamsville, Va., writes—"this section, in its climate, soil, minerals, mineral-springs, water power, &c., is certainly one of the most desirable in North America. But for want of proper roads, its immense resources have laid dormant. Our last legislature passed several rail-road bills, which will have the effect of calling public attention to this part of the country." Mr. McRoberts has issued a prospectus for the publication of a semi-monthly paper, to be called the "*Western Advocate*," the design of which is to promote the varied interests of Western Virginia. It is to be published at Lexington, Va., semi-monthly, at $1.25 in advance, $1.50 if paid in six months, $1.75 at the end of the year. Mr. McR. states that he was the publisher of the *Virginia Farmer*, twelve years ago. Persons wishing to subscribe for the *Advocate* are directed to address James Grey, Esq., Deerfield, Augusta co., Va.

Scare-crows.—The *Massachusetts Plowman* observes that scare-crows, to be most effective, should be made to resemble the object of which the crows are most afraid, that "is a real living man, lying in wait with his gun." To make a scare-crow it is therefore directed to take an old flour barrel, with one head or no head. Set it in the part of the field most exposed. Then take any old coat or frock, stuff it a little and let it hang as easy as when on a man. Now place your stuffed coat in the barrel and let one arm or both hang over a little. Put a hat on too and let it cover the face so close that it cannot be seen. This saves all trouble of making a face like a man's, and the barrel saves all trouble of being particular in the formation of the feet and legs. To complete the work place a few pine boughs over the whole. The boughs should half conceal the man. An old rusty gun or a stick of the right shape, should be placed in the hands of the man.

Do Kingbirds eat Working Bees?—The kingbird has been regarded as one of the greatest enemies of the apiarian, in some situations, from the fact that it is a devourer of bees. Wilson, the ornithologist, suggested that the bird only picked out the *drones*, and never injured the working bees. Some close observers have come to the same conclusion. One writer states that to test the matter, he killed a number of the birds, and though he found many drones in their gizzards, he could find no working bees in them. What has been the observation of others?

Potatoes Mixing at the root. A correspondent of an exchange paper wants to know if different kinds of potatoes will mix at the root. It is, we suppose, a somewhat common idea among farmers, that different varieties of potatoes, if planted near each other, will intermix, so as to produce new kinds. We are convinced the idea is incorrect. We do not believe it is possible for potatoes to mix in the tubers, any more than different kinds of turneps to mix in the bulbs. No one supposes such a mixture possible in regard to turneps, beets, or carrots. The different varieties may mix, to be sure, but they must mix in the *blossom*, and the *seed* produced by the blossoms containing such intermixture, must be planted in order to obtain the new variety thus originated. So it is with potatoes; the *balls* which grow on the top of the stalk, contain the seed; and by plants being raised from them, and in this way only, can new kinds be had.

Prices of Agricultural Products.

New-York, June 15, 1849.

FLOUR—Genesee, per bbl., $5a$5 25. Western, $4 62a $4.75.

GRAIN—Wheat, per bush., Genesee, $1.30 a $1.40—Ohio 99c.—Corn, Northern, 64a65c.—Rye, 58c Oats, 34a35c.

BUTTER—best, per lb., 18a20c.—western dairy, 10a15c.

CHEESE—per lb., 5a7c.

BEEF—Mess, per bbl., $11.50—Prime, $8.50.

PORK—Mess, per bbl., $10.25—Prime, $8.50.

LARD—per lb., 6½a7c., for good and prime.

HAMS—Smoked, per lb., 7a9c.

HEMP—American dew-rotted, per ton, $155.

HOPS—per lb., 6½a7c.

COTTON—Upland and Florida, per lb., 7a8½c.—New Orleans and Alabama, 7½a8½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	36a38c.
" half blood do.,	31a33c.
" one-fourth blood and common,	29a30c.

Remarks.—The demand for flour and grain is moderate, at quotations. Provisions are firm.

Wire for Fences.

WIRE of the best quality, of all sizes, bright, annealed or galvanized. Price from $7 to $12 per 100 lbs. When galvanized, 2½ cts. per lb. extra. Wire is best galvanized, as this keeps it bright, and it lasts much longer. A. B. ALLEN & CO.,

July 1—1t. 189 & 191 Water street, New-York

Wire for Fences.

BRIGHT and annealed, at 7 cts. per lb., for sale at the Albany Agricultural Warehouse. Galvanized Iron Wire furnished to order at manufacturers' prices. HORACE L. EMERY.

July 1. No. 369 & 371 Broadway, Albany, N. Y.

Offered

FOR SALE, the equal one-half interest in a *Nursery* of Fruit and Ornamental Trees, permanently established and beautifully located in New Jersey, within two hours ride, per Railroad, of New-York—six trains of cars passing daily along side and in full view of the nursery. The depot within five minutes walk of the grounds—containing from 50,000 to 100,000 thrifty seedling plants, a portion of which are ready for market—the greatest part ready for working this season. No other nursery in the place.

This is a rare offer, circumstances obliging one of the proprietors to make a change. The whole can be had if particularly required. For confidential particulars, address, *post paid*, J. J. SCOFIELD, Morristown, Morris Co., N. J.

July 1, 1849.—1t.

Office of the Commissioners of Emigration,

New-York, June, 1849.

THE COMMISSIONERS OF EMIGRATION respectfully solicit your attention to the facilities which are furnished by the Institution for the supply of laborers in agriculture, Railroad Making, House Building, Factory Labor, and almost every department of industry.

There are now in the care of the Commissioners, several hundreds of men, women, and children, and an inexhaustible supply arriving, anxious for employment, and willing to engage their services at the current prices of labor. Among them are many able-bodied females, who either have been accustomed to work on the farm or in dairies, or, who with little instruction would be able to do so, who would gladly accept situations of that character, did they but know where to find them. Believing also, that in many parts of this and other States of the Union, there is a dearth of laboring men and women, the Commissioners are desirous of extending, as widely as possible, the knowledge of the number of people desiring employment, and of receiving applications for them from those desiring their services.

The Commissioners will gladly receive such applications, and exert themselves to supply them in the best manner.

Communications, addressed to them, and enclosing the amount necessary to forward to the writers such persons as they require, will be duly acknowledged, and in all cases, if the employers desire it, a bargain will be made with the laborers that the first part of the wages agreed upon, shall be retained by the employer to reimburse the latter the amount expended in forwarding them.

Applications for laborers should state

1st. The occupation.
2d. The sex.
3d. Whether adults or children, or both are required.

Communications should be addressed to,

JOHN H. GRISCOM,
General Agent, Commissioners of Emigration, New-York.

July 1—1t.

Ohio Strawberry Plants.

BURR'S SEEDLINGS; Burr's New Pine, Ohio Mammoth, Sciota, Burr's Old Seedling, and Columbus varieties; for sale at 50 cents per doz. Orders directed to HORACE L. EMERY, Agricultural Warehouse, Albany, will be attended to for August planting.

July 1.—1t.*

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July.) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* GARDENING, *in a thoroughly practical as well as scientific sense.*

2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*

3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*

4. *To* RURAL ARCHITECTURE, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

NOTICES OF THE PRESS.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators, and it is scarcely necessary to repeat, that Mr. DOWNING's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

We would call especial attention to this work. We have subscribed for it from its first number, perused it carefully and practised upon its teachings, and do not hesitate to pronounce it a work of great merit and usefulness.—*Concord Freeman.*

Another volume begins with the next or July number. We most warmly commend this publication to all interested in Rural Architecture, or the improvement of gardens, orchards or country seats There is no publication so well calculated to exert an influence upon the taste of the country. in the departments to which it is devoted. It enjoys already a large circulation.—*New-Jersey State Gazette.*

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

The Farmer's Encyclopædia,

IN one volume. royal octavo, 1165 pages, beautifully bound; containing 17 fine plates, and numerous wood cuts. Edited by GOUVERNEUR EMERSON. A standard work of reference upon all subjects connected with farming and country life.

"Of all the Agricultural works that have been lately published, this appears the most likely to be of real service to the practical farmer."—*Central New-York Farmer.*

"The Farmer's Encyclopædia is a real treasury of *practical* information, wherein the experience of all ages and countries is *carefully posted up* to the present day, and admirably arranged for convenient reference"—*Dr Darlington.*

"It is a mine of wealth—no farmer should be without this truly valuable book."—*Burlington Gazette.*

"An excellent work fit to be distributed in premiums by Agricultural Societies. How much better, and in better taste, than the amount of its cost in money."—*John S Skinner.*

Sold by Carey & Hart. *Philadelphia*; C M. Saxton and John Wiley. *New-York*; Luther Tucker. and W. C. Little. *Albany*; Derby & Co., *Buffalo*; W. D. Ticknor & Co., and B B. Mussey, *Boston*; W H Derby & Co.. and Ely & Campbell, *Cincinnati*; Whiting & Huntingdon. *Columbus*; Norton & Beckwith, *Louisville. Ky*; J. B. Steel and Woodbridge & Co., *New Orleans*; M. Boullemet, *Mobile*; W. D. Skillman, *St Louis*; N. Hickman. *Baltimore*; A. Morris. *Richmond, Va*; H. D. Turner, *Raleigh, N. C.*; F. Taylor. *Washington, D. C.*

July 1, 1849.—1t.

The New Volume and New Prospectus of

THE PLOUGH, LOOM, AND ANVIL.

POPULAR as this Journal is, and so far successful beyond any we have heretofore established, its income does not yet exceed *its own expenses*; leaving the Editors to live on air or hope; neither of which is very substantial diet. Now, as we believe that we have not a friend who would willingly see the man wanting bread, who has been teaching others how to make it all his life, we at once frankly solicit our present patrons to use their influence to *average one* more subscriber each, and then "*The Plough, the Loom and the Anvil,*" and those that are working at it, will be doing what is commonly called a *safe business*, and not until then. We are truly sorry to be under the necessity of making this appeal; for, could we afford it, we would *rejoice*, as on past occasions, to show that we would most willingly work as hard. gratuitously, for the great industrial interests of the country, as we are now doing in the hope of at least a scanty support.

TERMS of the Plough, Loom, and Anvil, $10 for five subscribers; $5 for two, and $3 for one; or $5 *for two years' subscription*; 64 pages a month.

It is not in the way of remuneration, but to evince our gratitude for the kindness we solicit, and at the same time to promote the perusal of works which every farmer ought to read, that we hereby make the following offer:—

We engage to forward to every one who will send us by mail, at our risk, $10 for a club of five subscribers, or $5 for two subscribers, or the same for the first and second volumes; a copy. at his own option. either of Mr. Carey's admirable work—"*The Past, the Present, and the Future,*" or a copy of Col. Randall's book on "*Sheep Husbandry*"—decidedly the best work on the subject that has been offered to the American public. To any one making up and sending us in like manner. $20 for ten subscribers. we will supply a copy of "*Von Thaer's Principles of Agriculture,*" for a single English copy of which. we gave $12 in Boston a year ago, considering it a work of inestimable value. To all who may, in like manner, by mail, at our risk, forward $3 for one subscriber, we will send a copy of "*The Elements of Agriculture,*"—the postage of which will not be over four or five cents.

Address, J. S. SKINNER 81 Dock Street, Philadelphia.

☞ We shall feel and endeavor to deserve and requite the favor, to any Proprietor of a public journal, who shall have the kindness to give the above one insertion, for the benefit of one of the oldest of the fraternity of Editors. J. S. SKINNER.

July 1.—1t.

Kinderhook Wool Depot.

THE success of this enterprize, and the steady increase of business during the past 4 years. has induced the subscriber to associate with him Mr. Thomas M. Burt, as a partner in the business. The integrity and correct business habits of this gentleman. are well known to many prominent men throughout the State; and for more particular information. reference may be made to R. H. King, Esq., or John T. Norton. Esq., of Albany.

With increased facilities for extending their business. the enterprise will be conducted on the same principles as heretofore:

1. The FLEECES will be thrown into *sorts according to style and quality.*
2. A discrimination will be made between wool in good or bad condition.
3. All who desire it can have their clips kept separate.
4. Sales will be made invariably for cash.
5. The charges will be. for receiving. sorting and selling. one cent per pound. and the insurance, which will be 25 cents on $100 for a term of three months.
6. Liberal advances made in cash. on the usual terms.

Wool forwarded from the West and North. should be marked H. B. & Co., Kinderhook, N Y., with the initials of the owner's name on each sack, and shipped to East Albany.

Kinderhook, May 18, 1849. H. BLANCHARD.

After the 1st of June. the business will be conducted under the name and firm of H. BLANCHARD & Co.

Reference may be had to,
Dr. J. P. Beekman. Kinderhook, N. Y.
Benj. P. Johnson, Albany, "
L. A. Morrell. Lake Ridge, "
D. S Curtis, Canaan, "
C. W. Hull, New-Lebanon, "
J. Murdock Wheatland, "
C. W. Richmond. Aurora, "
Nathaniel Sawyer, Cincinnati. O.
M. D. Wellman & Co., Massillon, O.
Freeland, Stuart & Co., New-York City.
R. Carter, Chicago, Illinois.

Haying and Harvesting Tools.

Grain Cradles.—Grant's, and Myers & Bryan's, both premium cradles.

Grass and Grain Scythes—Dunn's and Troy. (premium scythes)
Revolving Horse Rakes—Wilcox and Downer's, " rakes.
Hand and Gleaning Rakes. of various makers.
Scythe Snaths—Clapp's. Lamson's and others.
Sickles. Rifles. Scythe Stones. &c., &c.
Anti-friction Rollers and Cranks for Grindstones.
Grindstones hung complete for use.

Also every Implement. Machine and Seed wanted by the farmer. All warranted. Constantly for sale at the Albany Agricultural Warehouse, Nos. 369 & 371 Broadway, Albany.

H L. EMERY.

☞ Catalogues gratis on application by mail, &c.

Morgan Horse Black-Hawk.

HIS well-known and popular stallion will stand this season, at the stable of the subscribers; terms, $15 the season, payable cash, or a satisfactory note on demand with interest. For par- ulars in regard to pedigree and performances, see large bills, d previous volumes of *The Cultivator*. D. & D. E. HILL.
Bridport, Vt., May 1, 1849.—3t.

Portable Self-Acting Cheese Press.

Patented August, 1847, by Chester Stone.

HE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it y be graduated as desired. The principle is admirably adapted packing flour into barrels and other uses. It acts on a double er purchase, the article pressed being the *power*; or in other rds "The cheese presses itself." Its weight is 70 to 100 lbs., cupies but little room, moved on castors or small wheels, and is d at only $7 to $10, according to size. Already in extensive e in the western part of the State, and only need to be seen to approved. For presses or exclusive rights to manufacture and l them in any parts of the counties of Saratoga, Washington, nsselaer or Columbia, apply to H. VAN OSTRAND,
March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Morse's Grey.

'HIS celebrated horse will stand the ensuing season at the stable of JAMES RICE, in Spiegletown, three miles north of the lage of Lansingburgh. He is a beautiful dapple grey, 15¾ hands gh, strongly and finely proportioned; has trotted his mile in 2 nutes and 50 seconds; is a square trotter, and combines first- e trotting qualities, and great powers of endurance, with unsur- ssed gentleness and docility. His colts are justly celebrated for eed, bottom and good temper, are eagerly sought after in the rket, and command prices varying from $150 to $500.

The very high reputation of his stock as road horses, and the traordinary prices they command, render him by far the most ofitable horse to breed from of any in the country.

Gentlemen sending mares from a distance, may rest assured that y will have such attendance and keeping as the owners desire, d upon the most reasonable terms. The horse will be under the arge of his former owner, Mr. CALVIN MORSE.

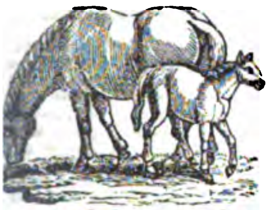
Terms, $10 the season. Insurance to be agreed upon.

Communications addressed I. T. GRANT, P. M., Junction, nsselaer county, will receive prompt attention.
May 1, 1849.—3t.

Important to the Public.

HORSE AND CATTLE MEDICINES.

n't permit your Horses or Cattle to die, when the means of cure are within the reach of all!



THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has wn tobe of a dangerous tendency These remedies act in harny with the vital principle, and when given according to the ditions which accompany each article, they are capable of exng and increasing the natural functions, without diminishing or troying their power, hence are safe in the hands of every one
G. H. DADD, M. D.

LIST OF HORSE AND CATTLE MEDICINES.

hysic balls, 75c. per box.
lterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
leave powder for diseases of the lungs, 75c. do.
rine powder for " " kidneys, 75c. do.
onic powder for bad condition of glanders, 75c. do.
ordial drink for inflammation of bowels, 75 c. per bottle.
iquid blister, 75c. per bottle.
intment for promoting the growth of hair, 50c. per pot.
ealing balsam for wounds and saddle-galls, 75c. per bottle.
Vash for inflamed eyes, 50c. per bottle.
intment for mange, scratches, old sores, &c. 50c. per bottle.
mbrocation for sore throat, 75c. per bottle.
oof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
orse Liniment, the most celebrated article known in England ameness of every description, 75c. and $1 per bottle.
istemper powder, for red water, $1 per bottle.
Vorm powders, for the removal of worms from the intestinal al, 75c. per package.

or sale by STIMPSON & REED, 26 Merchant's Row; also at DD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Haybket Square, Boston.

amphlets describing the diseases for which these remedies are l, can be had gratis.

umerous Certificates are in possession of the Proprietors, of es performed by the above medicines. June 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

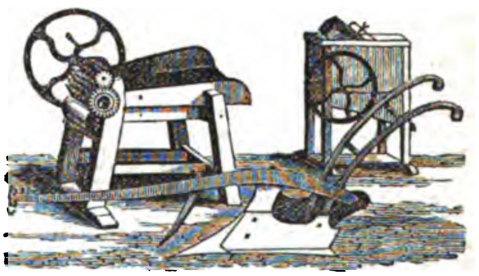
PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,
New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



John Mayher & Co.

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co.'s celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.
New-York, Oct. 1, 1848.—tf.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

Ohio Strawberry Plants.

BURR'S SEEDLINGS; Burr's New Pine, Ohio Mammoth, Sciota, Burr's Old Seedling, and Columbus varieties; for sale at 50 cents per doz. Orders directed to HORACE L. EMERY, Agricultural Warehouse, Albany, will be attended to for August planting.

July 1.—1t.*

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July,) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* GARDENING, *in a thoroughly practical as well as scientific sense.*

2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*

3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*

4. *To* RURAL ARCHITECTURE, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

NOTICES OF THE PRESS.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators, and it is scarcely necessary to repeat, that Mr. DOWNING's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect. Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

We would call especial attention to this work. We have subscribed for it from its first number, perused it carefully and practised upon its teachings, and do not hesitate to pronounce it a work of great merit and usefulness.—*Concord Freeman.*

Another volume begins with the next or July number. We most warmly commend this publication to all interested in Rural Architecture, or the improvement of gardens, orchards or country seats. There is no publication so well calculated to exert an influence upon the taste of the country, in the departments to which it is devoted. It enjoys already a large circulation.—*New-Jersey State Gazette.*

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

The Farmer's Encyclopædia,

IN one volume, royal octavo, 1165 pages, beautifully bound; containing 17 fine plates, and numerous wood cuts. Edited by GOUVERNEUR EMERSON. A standard work of reference upon all subjects connected with farming and country life.

"Of all the Agricultural works that have been lately published, this appears the most likely to be of real service to the practical farmer."—*Central New-York Farmer.*

"The Farmer's Encyclopædia is a real treasury of *practical* information, wherein the experience of all ages and countries is *carefully posted up* to the present day, and admirably arranged for convenient reference."—*Dr. Darlington.*

"It is a mine of wealth—no farmer should be without this truly valuable book."—*Burlington Gazette.*

"An excellent work fit to be distributed in premiums by Agricultural Societies. How much better, and in better taste, than the amount of its cost in money."—*John S. Skinner.*

Sold by Carey & Hart, *Philadelphia*; C. M. Saxton and John Wiley, *New-York*; Luther Tucker, and W. C. Little, *Albany*; Derby & Co., *Buffalo*; W. D. Ticknor & Co., and B. B. Mussey, *Boston*; W. H. Derby & Co., and Ely & Campbell, *Cincinnati*; Whiting & Huntington, *Columbus*; Norton & Beckwith, *Louisville, Ky*; J. B. Steel and Woodbridge & Co., *New Orleans*; M. Boullemet, *Mobile*; W. D. Skillman, *St. Louis*; N. Hickman, *Baltimore*; A. Morris, *Richmond, Va.*; H. D. Turner, *Raleigh, N. C.*; F. Taylor, *Washington, D. C.*

July 1, 1849.—1t.

The New Volume and New Prospectus of

THE PLOUGH, LOOM, AND ANVIL.

POPULAR as this Journal is, and so far successful beyond any we have heretofore established, its income does not yet exceed *its own expenses*; leaving the Editors to live on air or hope; neither of which is very substantial diet. Now, as we believe that we have not a friend who would willingly see the man wanting bread, who has been teaching others how to make it all his life we at once frankly solicit our present patrons to use their influence to *average one* more subscriber each, and then "*The Plough, the Loom and the Anvil,*" and those that are working at it, will be doing what is commonly called a *safe business*, and not until then. We are truly sorry to be under the necessity of making this appeal, for, could we afford it, we would *rejoice*, as on past occasions, to show that we would most willingly work as hard, gratuitously, for the great industrial interests of the country, as we are now doing in the hope of at least a scanty support.

TERMS of the Plough, Loom, and Anvil, $10 for five subscribers; $5 for two, and $3 for one; or $5 *for two years' subscription*; 64 pages a month.

It is not in the way of remuneration, but to evince our gratitude for the kindness we solicit, and at the same time to promote the perusal of works which every farmer ought to read, that we hereby make the following offer:—

We engage to forward to every one who will send us by mail, at our risk, $10 for a club of five subscribers, or $5 for two subscribers, or the same for the first and second volumes; a copy at his own option, either of Mr. Carey's admirable work—"*The Past, the Present, and the Future,*" or a copy of Col. Randall's book on "*Sheep Husbandry*"—decidedly the best work on the subject that has been offered to the American public. To any one making up and sending us in like manner, $20 for ten subscribers, we will supply a copy of "*Von Thaer's Principles of Agriculture,*" for a single English copy of which, we gave $12 in Boston a year ago, considering it a work of inestimable value. To all who may, in like manner, by mail, at our risk, forward $3 for one subscriber, we will send a copy of "*The Elements of Agriculture,*"—the postage of which will not be over four or five cents.

Address, J. S. SKINNER 81 Dock Street, Philadelphia

☞ We shall feel and endeavor to deserve and requite the favor, to any Proprietor of a public journal, who shall have the kindness to give the above one insertion, for the benefit of one of the oldest of the fraternity of Editors. J. S. SKINNER

July 1.—1t.

Kinderhook Wool Depot.

THE success of this enterprize, and the steady increase of business during the past 4 years, has induced the subscriber to associate with him Mr. Thomas M. Burt, as a partner in the business. The integrity and correct business habits of this gentleman, are well known to many prominent men throughout the State; and for more particular information, reference may be made to R. H. King, Esq., or John T. Norton, Esq., of Albany.

With increased facilities for extending their business, the enterprise will be conducted on the same principles as heretofore:

1. The FLEECES will be thrown into *sorts according to style and quality.*
2. A discrimination will be made between wool in good or bad condition.
3. All who desire it can have their clips kept separate.
4. Sales will be made invariably for cash.
5. The charges will be, for receiving, *sorting and selling*, one cent per pound, and the insurance, which will be 25 cents on $100 for a term of three months.
6. Liberal advances made in cash, on the usual terms.

Wool forwarded from the West and North, should be marked H. B. & Co., Kinderhook, N. Y., with the initials of the owner's name on each sack, and shipped to East Albany.

Kinderhook, May 18, 1849. H. BLANCHARD.

After the 1st of June, the business will be conducted under the name and firm of H. BLANCHARD & Co.

Reference may be had to,
Dr. J. P. Beekman, Kinderhook, N. Y.
Benj. P. Johnson, Albany, "
L. A. Morrell, Lake Ridge, "
D. S. Curtis, Canaan, "
C. W. Hull, New-Lebanon, "
J. Murdock, Wheatland, "
C. W. Richmond, Aurora, "
Nathaniel Sawyer, Cincinnati, O.
M. D. Wellman & Co., Massillon, O.
Freeland, Stuart & Co., New-York City.
R. Carter, Chicago, Illinois.

Haying and Harvesting Tools.

Grain Cradles.—Grant's, and Myers & Bryan's, both premium cradles.

Grass and Grain Scythes—Dunn's and Troy, (premium scythes.)
Revolving Horse Rakes—Wilcox and Downer's, " rakes.
Hand and Gleaning Rakes, of various makers.
Scythe Snaths—Clapp's, Lamson's and others.
Sickles, Rifles, Scythe Stones, &c., &c.
Anti-friction Rollers and Cranks for Grindstones.
Grindstones hung complete for use.

Also every Implement, Machine and Seed wanted by the farmer. All warranted. Constantly for sale at the Albany Agricultural Warehouse, Nos. 369 & 371 Broadway, Albany.

H. L. EMERY.

☞ Catalogues gratis on application by mail, &c.

Morgan Horse Black-Hawk.

THIS well-known and popular stallion will stand this season, at the stable of the subscribers; terms, $15 the season, payable in cash, or a satisfactory note on demand with interest. For particulars in regard to pedigree and performances, see large bills, and previous volumes of *The Cultivator*. D. & D. E. HILL.

Bridport, Vt., May 1, 1849.—3t.

Portable Self-Acting Cheese Press.

Patented August, 1847, by Chester Stone.

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Morse's Grey.

THIS celebrated horse will stand the ensuing season at the stable of JAMES RICE, in Spiegletown, three miles north of the village of Lansingburgh. He is a beautiful dapple grey, 15¾ hands high, strongly and finely proportioned; has trotted his mile in 2 minutes and 50 seconds; is a square trotter, and combines first-rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper, are eagerly sought after in the market, and command prices varying from $150 to $500.

The very high reputation of his stock as road horses, and the extraordinary prices they command, render him by far the most profitable horse to breed from of any in the country.

Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner, Mr. CALVIN MORSE.

Terms, $10 the season. Insurance to be agreed upon.

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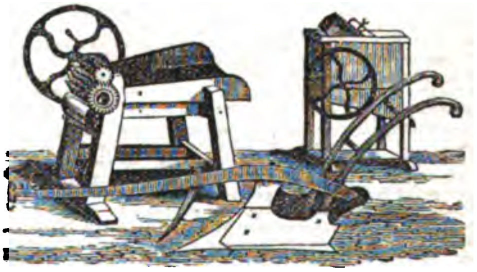

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N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

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Of all kinds, for sale at the office of The Cultivator.

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WHEELER'S PATENT IMPROVED PORTABLE

Railroad Horse Power, Thrasher & Separator.

THE advantages of the above horse powers are—1. They occupy but little more space than a single horse. 2. They can be moved by the weight of the horse only, by placing them at an angle of 10 or 15 degrees. 3 They are comparatively light and portable, and can be easily transported. 4. They are simply constructed, not liable to get out of order, and move with little friction. the revolving plane gearing without any complex or intermediate wheels, directly into the pinion upon the shaft on which the pully belt runs.

The Threshers consist of a small spiked cylinder with a concave plane over it, and a level feeding table. There are several improvements in the overshot thresher. 1. They admit of a level table for feeding, thus enabling the tenders to stand erect, and control the motion of the horse and machine by means of a brake. by which accidents are avoided. 2. In consequence of the spikes lifting the straw and doing the work on the top, heavy substances such as stones, blocks, &c., drop at the end of the table, and are not carried between the spikes, by which they and the machine are broken 3. The overshot cylinder does not scatter the grain, but throws it within three feet of the machine. 4. This arrangement also admits of attaching a separator high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is longer, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary thrashers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder, is fully made up by those in the concave, which is stationary. 7. The separator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men. with a single Power, can thresh from 75 to 100 bushels of wheat or rye; or four men with a double Power, 175 to 225 bushels of wheat or rye, or double that quantity of oats or buckwheat. per day. All the above are compact and can be carried where wanted complete, or they may be readily taken apart and packed for distant transportation by a wagon or otherwise.

Price of	single	Power,	$80
"	"	Thresher,	28
"	"	Separator and fixtures,	7
"	"	Bands for Driving, etc.,	5
"	"	Saw mill, complete and in running order,	35

The price of the double power, thresher, separator, &c., complete. is $145, including rights of using. The above are sold singly or together. as desired.

The above power is warranted to work well and give satisfaction.

A. B. ALLEN & CO.
July 1—2t. 189 & 191 Water street, New York.

Peruvian Guano.

JUST arrived from the Chinche Islands, 730 tons first quality Peruvian Guano. Six years' of experience in the use of this guano by our farmers and gardeners, in the States bordering the Atlantic coast, has proved it far superior to any other, and the cheapest manure they can purchase. It is particularly valuable for wheat and other winter grain, grass, and in fact, all crops grown.

A. B. ALLEN & CO.,
July 1—2t. 189 & 191 Water street, New York.

Wheeler's Patent Horse Power and Threshing Machines.

THE attention of farmers is called to the following extract from the pen of J. N. Rottiers, Esq., of Lafargeville, N. Y., June 8, 1849, it being one of the numerous communications received, concerning the utility of the above celebrated machines:—

"Dear Sir—Wheeler's Threshing Machine, Power, &c., which I purchased of you, has proved satisfactory in every respect. The fact is, the whole of the machine is an admirable simple contrivance, and that any improvement has been made in it, would seem incredible to me, if I had not your word for it.

Practically a farmer, I have used these fourteen years, a great variety of threshing machines, horse powers, &c., but with none am I so well satisfied as with this which I purchased 2 years since.

One year more, and mine will have paid for itself, and then I would not take two hundred dollars for it, and do without another like it.

With a change of horses, and men enough to take away or stack the straw, I believe I can thresh as much per day as with any large Six Horse Power machine, and with as much ease for the team.

But we do not want all the neighbors to help thresh—as three of us and two horses generally thresh from ten to twelve hundred sheaves per day, besides taking care of a large stock of cattle, &c., &c.

It is in fact the very machine which should stand upon the barn floor of every farmer. or where the farm is not large enough, two or more farmers should join. and own one together. Change works, and do their own threshing.

Wishing that it should be generally known as a benefit in time, labor and economy, I have on all occasions deemed it a pleasure to speak in its praise, and several of my neighbors say they shall purchase them."

The question is frequently asked—Why is not a cleaner attached to Wheeler's Thresher? In answer to this question, I will give the reasons. as expressed by an extensive grain grower who has used nearly all kinds of threshing machines, cleaners, &c.

1st. Because the original cost of this Horse Power, Thresher and Separator, together with one of Grant's largest and best fan-mills, is from seventy to one hundred dollars less than any good cleaner and thresher combined can be obtained for.

2d. Because, when purchased separate, they can be used separately, are more portable, simple, and durable; also, the fan-mill is adapted for cleaning all kinds of grain and grass seeds, and the Thresher for threshing clover and timothy.

3d. Because of the great simplicity and reduced friction of machinery, less power is required, no driver is needed, fewer men are necessary to attend to the whole operation, to do the same amount of work, than when the cleaner is combined with the thresher.

4th. Because less grain is wasted—as the fan-mill, when driven direct from the power is more steady, and cleans perfectly with once going through—while, when the cleaner is combined, it derives its motion from the cylinder, which is always varying its speed as the feeder presses fast or slow, consequently blowing away grain with the straw and chaff at one moment, and leaving it half cleaned from the chaff the next—requiring, nine cases in ten, another operation by a fan-mill to prepare it for market.

5th. Because the expense of threshing is much reduced by the great simplicity of these machines, and all can be managed by the hands usually about the farm; and in stormy weather, all can be operated inside of barns, when the laborers and teams could do little out of doors to advantage.

For terms, prices, descriptions, &c., see Agricultural papers for 1847, 1848, and 1849, also descriptive catalogues of Albany Agricultural Warehouse and Seed Store, furnished gratis at No. 369 and 371 Broadway, Albany, N. Y., by

July 1, 1849. HORACE L. EMERY.

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

New Series. ALBANY, AUGUST, 1849. Vol. VI.—No. 8.

Agricultural Notes.

Husbandry of Vermont.

We had lately an opportunity of passing through several of the western counties of Vermont, and offer the following notes in regard to the different matters to which our attention was drawn.

Sheep.—Beginning at the farther end of our tour, we first called on S. W. Jewett, of Weybridge, whose flock of sheep is well known. Since we had before seen it, Mr. J. has imported some ewes from the flock of the late Lord Western, Essex, England. They had just been shorn. We did not see their fleeces. They are well shaped sheep, and of good size. Mr. J. is crossing them, and a part of the rest of his flock with a ram of the Taintor importation, and has some handsome lambs of this cross.

M., & A. L. Bingham, of Cornwall, have noted flocks. The former has 500 and the latter 1400 head, including lambs. Their aim, we understand, has been for several years, to produce sheep of strong constitution, with heavy fleeces, of about the quality of common Merino. Mr. M. Bingham showed us 400 fleeces very well washed and put up in good order, which he informed us averaged five pounds each. Messrs. B. have purchased sheep of Mr. Taintor, of Hartford, Ct., imported by him from France. Mr. M. B. sheared 12 ewes of this stock the present season. They were not washed. One of the fleeces weighed seventeen pounds, and the average was thirteen pounds ten ounces—twelve months' growth. Mr. A. L. Bingham has between forty and fifty, of different ages, of the Taintor stock, and a similar stock imported by F. Rotch, Esq., of Otsego county, N. Y. Of these, several had their fleeces on, and are to be shown at the next N. Y. State Fair. These sheep are much larger than any of the Spanish race that have heretofore been introduced here, and produce much heavier fleeces than any others with which we are acquainted. Their bodies, and even their heads and legs, are thickly covered with wool. Some of them have very great perfection of form, with very even fleeces, of good quality for Merino.

Wm. R. Sanford, of Orwell, has a flock of fine Merinos, which for several years has numbered from 300 to 500 head. Mr. S. has managed his flock with much care and judgment, and it has long held a high rank among the best of this section. This year's clip, 300 fleeces, well cleaned and nicely put up, averaged over four pounds each.

J. H. Chittenden, of Orwell, has a flock of 383, a portion of which are Saxons, from the flock of Mr. Colt, of Pittsfield, Mass., and the younger part of the flock are a cross of these on Merinos. The fleeces averaged 3 lbs., 5¼ ounces, clean, and in good order. John W. Bacon, of Orwell, has 215 sheep, mostly of Saxon blood; the fleeces of which averaged 3¼ lbs. the present season.

Jesse Hines, of Brandon, usually keeps about 450 pure Merinos—has this season 364. Mr. H. has exhibited sheep at the shows of the N. Y. State Ag. Society, which have been highly commended. After examining his whole flock, we are enabled to say that in our opinion, he is a judicious and careful breeder. His flock shows great uniformity in shape and weight of carcass, and presents an admirable appearance of healthiness and thrift. From what we saw of the fleeces, there is a general uniformity in the style of the wool, and the prices at which it has sold denote its quality. For several years past, excepting last year, it has brought an average of about forty cents per lb., and the fleeces have averaged 4¼ lbs. each.

J. S. Pettibone, of Manchester, has 400 sheep. They are descended from ewes of the Humphrey stock, crossed with rams from the Jarvis flock, and others from the flock kept by the Shakers at Enfield, N. H. He has paid much attention to the management of his flock for many years, and his care and attention has been well repaid. In respect to wool, this flock presents rather a peculiar character. It has generally an unusual length of staple for Merino wool, and is very soft, elastic, white and free from gum. The weight of the fleeces, washed, comparing one year with another, has been 4¼ lbs. He has now, two years' clip on hand. For several previous clips, he has obtained forty cents per pound. We would not presume to dictate so experienced and successful a wool-grower as Mr. Pettibone,—but we were so struck with the style of much of his wool, that we should like to see the experiment made, with a selection from the flock, for the production of the *finest* kind of wool for muslin de laines and merino cloths. It appears to us that wool might in this way be obtained, which would be very superior for these purposes.

Shelter and Food for Sheep.—The importance of shelter for sheep, is acknowledged by all the best wool-growers with whom we conversed, and most of those we visited, have made good arrangements in this respect. Mr. A. L. Bingham has extensive accommodations of this kind, lately completed. His sheds, placed around his barns and yards, with their various divisions and apartments, for sheep of various ages and conditions, seem almost like a labyrinth; but when their situation and their relative connection is understood, they are seen to be very convenient. Though all the apartments can be well aired and ventilated, the temperature can be so regulated in some of them that they may be warm enough to have the lambs come at any time in the winter, without any danger of their suffering from cold. Most of the farmers we have named, have such shelters that the sheep can obtain protection from storms at all times, and many deem it important that they are not *wet* during the winter.

Much attention is paid to feeding the sheep. Hay, straw, and pea-haulm constitute the bulk of winter food. They are fed, mostly, in oblong boxes, with round smooth rungs at such distances apart that the sheep can readily pass their heads between them. They eat with their heads in the boxes, and do not pull the hay over each other, or waste it, as they will do when fed from racks made in the old mode. Whatever is left in the boxes is taken away and fed to young horse-stock or cattle, which eat it well. Carrots and other roots are given to the sheep through the winter, and the allowance to the ewes is increased when they suckle. All speak highly of the carrot. The beet is less nutritive than the carrot, but from its cathartic quality, is useful as a *medicine* when sheep are kept chiefly on dry fodder. The carrot yields from 600 to 800 bushels per acre. All the sheep have constant access to salt, and to the best of water, which in most instances, is brought by aqueducts into their respective yards, where it runs at all times, unchecked by drouth or frost.

Another great advantage from thus keeping sheep confined in winter, is the saving of manure. Muck and litter, spread over the ground at first, absorb all the liquids, and the manure is of the strongest and best kind for any purpose.

The sheep are generally pastured on hilly or mountainous lands, which are seldom or never plowed, and in many instances would be of little value for any other purpose. These pastures afford sweet and nutritious feed, and the animals thrive well and are healthy here. Sheep are kept on them for a greater part of the year than would be expected by a person not acquainted with them. The rule is, to keep the sheep out till snow comes, if it is not till December; and in many instances they are turned out again as soon as the ground is bare. Mr. Hines informed us that he turned out a portion of his flock, the present season, the 13th of April, and that 200 sheep did not eat 200 pounds of hay afterwards. He has often turned out as early and sometimes earlier than the date mentioned. Mr. Pettibone states that he has sometimes turned out in March —often the early part of April. In only moderate storms, the sheep have shelter in woods; if severe storms occur, they are taken up.

It may seem singular that sheep can obtain support so much of the year on these mountain pastures. During the warm season, they feed almost entirely on the highest parts; and the lower slopes and valleys are left comparatively untouched for several weeks. The grass—(blue-grass, &c.) is of such a nature that it is not greatly injured by frost; and as the weather becomes cold, the sheep descend to the warmer and lower parts, where the feed is abundant. What is not eaten in the fall, remains till spring; and being covered with snow and excluded from the air during winter, it appears quite fresh, and affords good support to the sheep as soon as they are turned out. The warm valleys and sunny sides of the hills, protected from cold blasts, feel the first influences of returning spring, and a thick and sweet herbage is soon produced, on which, in connexion with the growth of the former season, the sheep subsist, till the increasing warmth of the season clothes the mountain ranges with verdure, and the sheep again ascend to their favorite haunts.

Facilities for keeping sheep.—Much of the region through which we passed, affords peculiar advantages for keeping sheep and other live-stock. Many farms comprise three descriptions of land, each adapted to a different purpose. A portion lies on streams which overflow their banks in spring, and produces every year, with no attention whatever, (except in some instances to keep out the wild grasses and shrubs,) from a ton and a-half to two tons of hay to the acre. A second portion is situated between the meadows and hills, and forms the most easy and profitable soil for cultivation, and the production of grains, vegetables and fruits. A third portion lies on the hills and mountains, and affords permanent pasturage. The pastures generally receive no manure except what is left by the stock while grazing them; though the application of plaster is sometimes resorted to with excellent advantage. Thus the second portion of the farm, or that which is cultivated, is all that does not support itself, and this receives the the benefit of the other portions. To this, the stock is brought in winter to consume the hay grown on the intervales, and the manure is copiously applied to the cultivated crops, making the land rich, and insuring large returns. But the alluvial meadows, besides affording, in many cases, the hay for all the stock of the farm, are often grazed in spring, before the grass has started sufficiently in the pastures to support stock, and are always closely fed from the time the hay is off till snow falls. Notwithstanding this, the produce is undiminished.

In respect to the effect of feeding these meadows, we questioned many of the farmers whom we met. The general testimony was, that it did no injury, and some affirmed that in many cases it was a benefit. Mr. Thrall, an intelligent and observing farmer in Rutland, informed us that his meadows were decidedly improved by feeding; because, if they were not fed, and the "old fog" was left on the ground, the grass became *sour* and wild herbage came in. This was also the testimony of Mr. Kelley, a large farmer in the same neighborhood.

The alluvial lands to which we allude, are mostly situated on the waters of the Lemon-Fair, the Otter-Creek, and the Batten-Kill. Some of the higher and warmer portions are sometimes cultivated, and produce the most luxuriant crops. Mr. Thrall showed us a beautiful field of corn, on a branch of the Otter-Creek, and informed us that he had, in a former season, raised from this land one hundred and two bushels of corn to the acre, ascertained by actual measurement.

Many of the mountain pastures are valued at only $3 to $8 an acre. It costs but little to fence them, either for sheep or cattle. A lot of suitable soil and aspect is first selected; it is cleared of wood and sown to grass. It is surrounded by a *bush* fence, made by falling trees and shrubs into a line, and in such a manner as to turn the stock. The fence being in the woods, it is not necessary that it should be very high or very strong, and with a little attention every spring, to fill up the lowest places, it lasts many years.

Dairying.—On some farms, cows have lately taken the place of sheep; and we are inclined to think that, on the most level and fertile lands, a considerable change is destined to take place in this respect. Wool-growing will probably be more confined to the cheaper and rougher soils, and the making of butter and cheese, and the fattening of stock will be more extensively pursued on the more valuable portions. In Orwell, Mr. Sanford conducted us to several cheese-dairies that appear to be well managed. J. C. Thomas keeps forty-eight cows. He did not commence making cheese last year till after the first of June. He sold his cheese *green* at six cents per pound. The cows yielded an average of $30 each, besides the milk, butter and cheese used in the family, not reckoned.

Israel Smith keeps fifty cows,—has generally sold his cheese at about six and a half cents per pound; and the average return for each cow, in cheese and butter, has been $25 the season. It is proper to mention, that this section of the country has been visited by severe drouths for the last three seasons; and myriads of grasshoppers have each season eaten up the herbage of the pastures. These causes have, it is thought, lessened the produce of the dairies to the amount of twenty to twenty-five per cent. Mr. Smith has a neat and productive farm consisting of 430 acres. He has lately erected a commodious and convenient barn, for the accommodatio of his cows. They stand on each side of the floor-way, which runs lengthwise of the barn, and are fed directly from the floor, without mangers,—a plank eight or ten inches high preventing the fodder from getting under foot. There is a cellar under the barn for storing vegetables, for winter feeding. Mr. S. prefers the carrot to any other root, and raises from an acre to two acres annually. They are fed in quantities of a peck to half a bushel to a cow through the winter,—the larger quantity being given from the time the cows calve till they go to pasture. Both Mr. Smith and Mr. Thomas have formerly kept sheep. They concur in stating that cows are most profitable on their farms. The whey in both dairies is fed to swine; and we did not understand that any credit was made for it, in the estimate of returns for the cows.

On the farm of the late **John Thomas**, sixty cows are kept,—twenty at the homestead, and forty under he care of a tenant. The home dairy (we did not see he other,) is conducted with great neatness, and the cheese has a high reputation for excellence,—commanding seven cents per pound. We obtained no statistics as to the quantity produced.

D. C. Rust has thirty cows, and his fixtures for making cheese are well arranged. His absence from home prevented our obtaining particulars in regard to he dairy.

Improvement in Cattle.—Considerable interest is awakened in several neighborhoods, in regard to the mprovement of cattle. **A. Chapman**, of Middlebury, kept for several years a first rate Ayrshire bull, from he herd of Mr. Cushing, of Watertown, Mass. We have before spoken of this stock; but it has since been more fully proved for the dairy. Mr. C. has several half blood, and some three-quarter blood Ayrshire ows. Some of them are, in points, about all that ould be looked for in a dairy-cow; and we have reason o believe that their "looks do not belie them." Mr. C. informs us, that in fourteen days of June, 1848, four f these cows made 80¾ pounds of butter, besides supplying a family of fourteen persons with milk and ream. One of the four made 11¾ pounds of butter in seven days. The last of September, 1848, three of the bove four cows made 30 pounds of butter in seven ays,—or ten pounds per week each. They are a mall-boned, thrifty stock. Mr. C. states that he illed a pair of half blood steers, three years and six months old, fed for two months mostly on sugar beets,—o meal or grain of any kind,—and they weighed a rifle over a thousand pounds each.

Messrs. **Bingham**, of Cornwall, have introduced the ull blood Herefords, from the late herd of Corning & otham, of this city. They look, generally, remarka-y well, and prove to be a very valuable stock for his section. Their hardiness adapts them to the climate; they are easily kept, and thrive rapidly on hay r grass. The general characteristics of the Herefords ve been stated in our columns. A. L. Bingham has veral Durham heifers, purchased of Mr. Rotch, of tsego county, N. Y., which he is crossing with Here-rd bulls.

Paris Fletcher, of Bridport, has several full blood urham cows, and several good half bloods. Two of e full bloods have lately been sold to Mr. Henshaw, Boston. Mr. **Chipman**, of Shoreham, has some fine ws,—crosses of the Durham breed. A four-year-old w of his gave, as was stated, 24 quarts of milk per y in June.

Mr. **Sanford**, of Orwell, has some full blood Deons, and some highly crossed with the Devon. He s a beautiful young bull, purchased of Mr. Atwood, Connecticut. He was by Mr. Hurbut's bull, Bloom-ld; his dam from the herd of Mr. Washbon, of Otsego unty, N. Y. The Devons have thus far done well in Mr. S.'s hands, and he is determined to increase them. We see nothing to hinder their being a useful and profitable stock here.

Mr. **Vanderlip**, keeper of the hotel at Manchester, has some Durham cows, from the herd formerly owned by Hon. L. C. Ball, of Hoosick, N. Y.; two of which are great milkers. He has also some handsome cows and heifers from Connecticut, showing much Devon blood, which appear well as dairy cows. There are several bulls and considerable young stock in the neighborhood, mixed more or less with the Ayrshire and Devon blood; and the farmers generally consider an infusion of the blood of these breeds an improvement.

Horses.—The introduction of "Black Hawk," has made an unquestionable and important improvement in the horse-stock of this section. The oldest of his progeny here are four years old, and have been more or less proved. They have generally size enough, and a large proportion of them are superior in form, style, and action. The maximum of their speed has not, of course, been ascertained at this green age; but that they will not be wanting in this respect, might be shown by examples "too numerous to mention" here. As a specimen, we will refer to the performance of a mare, four years old, owned by J. W. **Holcomb**, of Ticonderoga, which, as we were credibly informed, trotted in a sleigh, last winter, *twenty-six miles in two hours and ten minutes*. Those who wish farther particulars in regard to the stock, will obtain them by making inquiries in the proper quarter.

Mr. J. **Hill**, of Sunderland, has introduced a horse which is a cross of the English draft-horse. We had not an opportunity of seeing him; but he was described to us as being six years old,—seventeen hands high,—weight 1380 pounds. He is said to be well made, and a good traveller. It is thought he will be useful in improving the stock of the neighborhood.

Appearance of Crops.—We found that portion of Vermont lying between the Green Mountains and Lake Champlain, suffering for want of rain. *Grass*, so important to this section, must be light, particularly on old grounds. In other sections through which we passed, the crop looked well. *Wheat* is not very extensively cultivated. It generally does well,—nearly as well as it ever did here, except when attacked by the midge,—commonly called the "weevil." The means of escaping this insect, are to have the grain either very *early* or very *late*. Early winter wheat may become too far matured to be much injured by the insect, by the time it appears; and the sowing of spring wheat is deferred till the last of May, so that it will come into bloom after the insect has passed. We saw in Shoreham, several fields of very promising winter wheat, and were informed that this kind generally gives good yields. The late sowing of spring wheat, to which the farmers are obliged to resort, renders it liable to rust; but if it escapes this, it yields from twenty to thirty bushels, and sometimes over forty bushels per acre. *Oats* are extensively cultivated, and yield well. They may be said to be the only grain of which a general surplus is produced. *Indian corn* is raised in sufficient quantity for home consumption. The warm valleys of the Otter-Creek and Batten-Kill produce good crops,—some farmers raising from 500 to a thousand bushels each. *Peas* are a valuable crop on many farms. Mr. Sanford, of Orwell, who cultivates them quite extensively, puts them on sward-ground, plowed either in autumn or spring, sows three bushels of seed to the acre, and obtains from twenty-five to thirty bushels per acre. The crop is cultivated with but little expense; it leaves the ground light and clean, and it comes in early for fattening hogs in the fall, for which purpose, in connexion with the waste of the dairy, it is much used. Peas are considered worth as much, or more per bushel, as Indian corn. Mixed with oats and ground, they form the best of feed for horses, and also for sheep. The variety commonly cultivated is the Canada field pea. *Potatoes* have generally suffered from the *rot* for several years, and the cultivation of the crop has greatly decreased on this account. The variety called *western reds* has generally escaped the rot better than others. *Broom-corn* is raised to some extent in some neighborhoods, and is made into brooms by those who raise it. Messrs. RUST, HIGGINS and NOBLE, of Orwell, are engaged in the business. The latter has eight acres the present season. Of *fruits*, apples, pears and plums do well on the warmer soils, and particularly well on the slate loams. We were sorry to see a general neglect, in most neighborhoods, in regard to the culture of fruit trees. On many farms, the only orchards were those planted by the first settlers, which, though formerly flourishing, were in most instances in an unproductive condition. Now that rail-roads are soon to afford ready means of transportation to the best markets, we hope more attention will be given in this section to fruits, which we are confident would give profitable returns.

GENERAL IMPROVEMENT.—We were happy to notice visible signs of improvement in various branches of agriculture, in most neighborhoods through which we passed; and we saw many places, besides those we visited, which we should have been pleased to examine, had opportunity permitted. Among these, we may name the neat looking farms of Mr. MARSH, of Clarendon, Mr. HULL, of Wallingford, Mr. HILL and Mr. LATHROP, of Sunderland, Mr. CANFIELD, of Arlington, and others, whose owners' names we did not learn.

Suggestions for Farmers.

System, Order, and Economy, in Feeding Stock.

To all farmers, whether occupying fifty acres or three hundred and fifty acres, there is no portion of their duty that I would more urgertly press on them, than System, Order and Economy in *feeding* their cattle and stock generally. Nature has implanted in all living creatures, two laws, which never fail, while in health, to induce the use of nourishment: and these imperative laws are hunger and thirst. Regular and systematic obedience to these laws, conduces to health,—any deviation from system and regularity, leads to *disease and death*.

I deem it wise to seek and examine the opinions of men who devote large portions of their lives to the study of the animal structure, and the functions of the complicated machinery of life; and while we appreciate the services rendered to us, we may with advantage, temper their zeal, by using and applying, every day, facts, indicating the true course of action to be pursued in our agricultural vocation.

Thus, though the process of digestion of food in the stomach, seems in the minds of some men to be well understood, I confess that to me, the subject seems to need far more investigation. Great advances have been made, deep research and strong reasoning, yet the conclusions may not be definite. Nevertheless, science has so far opened her treasures to us, that with careful observation, added to study, we *can* regulate the nature of our animals, so as to add to or diminish their fat at our pleasure.

To effect this desirable object, we must remember that it is the sensation of hunger and thirst, and their proper gratification, we are to watch and appease. Observation and reasoning must guide us in the selection of the proper material, and its due preparation. It is not my intention to go into the subject of feeding or fattening our animals, but to lead the farmer to the consideration of the importance of rigid *system* in this and every other branch of farming. It is necessary, however, to touch upon feeding, incidentally, to prove my positions.

We give to animals a *variety* of substances, from all of which certain principles are derived, of greater or less value in the production of fat and muscle; but it is a fact which ought to be better known, that from each and all of these varieties of food, a few elementary or constituent parts, alone contain the *nutritive matter*. Hence the necessity for ascertaining *which* of the varieties afford the greatest quantity of nutriment,—a most important source of true economy. These elements derived from vegetable substances, are mainly gluten, starch, gum and sugar; and of these, we find the largest portion of all our grains to be starch and gluten.

This gluten is the great nourishing portion of our fodder; upon this our stock will always thrive and do well, while on the contrary, if gluten is *absent*, and the other elements *abundant*, they will fall off and ultimately perish.

Perhaps, some may ask, what is this gluten? why not use some word that all may understand? In reply I would say, that the brevity of the word is most convenient; though undoubtedly this, like many other terms in daily use, require oft repeated explanation, until familiarity shall rank them among words of every day common use. Gluten is the tough, elastic substance which remains after washing flour in a cloth until the starch and all other matters are carried off; gluten remains as a tenaceous adhesive mass, insoluble in water, but soluble in alcohol, and readily soluble in the stomach of animals. This is the portion of our wheat and other grains which affords the most valuable nutriment to our cattle and other animals. The establishment of this fact, teaches us the necessity of examining our varieties of food, that we may use those possessing the largest share of this nutritive element, and establish a system of feeding without waste, and accumulate fat in the least time. These examinations have been made for the benefit of the English cattle-breeders, and I select a few varieties as given in the following table, to show how much vegetable substances vary in nutritive power.

One thousand parts of the following vegetables in their green state, afforded nutritive matter as follows:—

	Whole quantity of nutritive matter.	Starch.	Gluten.	Sugar, &c.
Wheat,…………	955	730	226	
Barley,…………	920	790	60	70
Oats,…………	743	641	87	15
Rye,…………	792	645	38	109
Peas,…………	570	501	26	43
Oil Meal,…………	151	123	17	11
Clover,…………	39	30	5	4
Timothy,…………	33	24	……	9

Davy's Ag. Chemistry.

It is to be hoped that before long we may add Indian Corn to the foregoing list; but as yet no sufficiently accurate *examination has been completed*.

Here "we have facts abundant to show" the necessity of *a system*, to avoid waste. But every farmer knows or ought to know that, if a cow is deprived of her food in sufficient quantity, for even one day, the quantity of milk will be somewhat reduced, and it will require *two* or more days of *regular* feeding to bring the quantity of milk back to its average quantity. This is another proof of the need for system and order with our stock.

We are all familiar with the art of mastication, and the method by which our cattle perform this essential preparation of their food for digestion. From observation, we know the necessity of this grinding process, and when from any cause it is suspended, our cattle become diseased. Hence we can readily see that when we shut our cattle in pens, stalls or yards, we deprive them of their natural exercise, and interfere with their natural habits. To enable our stock to thrive and fatten under such restraints, we are compelled to aid them in various ways; the most usual being the application of food in a partially prepared state, by grinding, or breaking it into parts, that it may be more easily digested. Various trials have proved the efficacy of this system; for instance, two milch cows were stalled and fed as follows, for five days, on *whole* barley, with grass, and yielded one hundred and eleven pounds of milk. The same food was continued with regularity for five days longer, and the milk decreased ninety-seven pounds. The same cow at another period was fed on *ground* barley, with grass and some hay, and produced during the first five days, one hundred five and a half pounds of milk; in the next five days she gave one hundred and five pounds, and being continued on the same *ground* feed for five days longer, the milk increased to one hundred and ten pounds. The results from the second cow were similar.

It cannot be necessary to multiply like cases, for the truth is very generally understood, that all food when bruised or ground into meal, is better for our stock than in a whole or unbroken state.

This leads us to inquire how we can grind or break the food with most economy. The expense of sending to a distant mill is a serious impediment, detaining a man and team the greater part of a day. The small steel hand-mills wear too rapidly. These difficulties have caused the production of various contrivances for grinding grain by such horse power as most of our farmers can command.

Both Hussey and Sinclair, of Baltimore, have machines for grinding corn and cob together for feed; but we are not yet decided as to the economy of using the cob; for my own part, having tried it for two successive years, I am rather disposed to abandon it; yet we should wait the coming of the several analyses of the corn plant now in progress, before we relinquish it.

In Massachusetts, a small run of stones has been so arranged as to grind grain or bruise it for food, and it has many advocates. The most perfect machine however, as yet produced, is the mill patented by Fitzgerald, and now manufactured in New-York by Charles Ross & Co. Many are using this small mill on their farms with advantage, in various ways; for its ingenious and simple construction, enables the farmer to break or grind any of his grains for feed; or at pleasure, he can reduce them to the finest meal for his family use. Another advantage is that, he may grind every *grass seed* or seed of every *weed* which finds its way into his barn with the grain, which being separated by the fanning mill, and ground in this small mill, affords a highly nutritious food for stock, while it destroys, and thus prevents the propagation of foul weeds. Here then is the means by which a systematic feeding of our stock may in its season be rigidly carried on. The power of two horses is necessary for these small mills, and every farmer can best make his own calculations as to the economy of the system, which must be governed by the size of his farm and the number of his stock. AGRICOLA. *Seneca County*.

Shall we kill Moles?

We have had several inquiries relative to the best modes of destroying these animals, and have in former numbers given descriptions of traps most approved of for that purpose. The question, however, has been raised, whether it is for the interest of the farmer to destroy moles? Their chief food is insects, and it is to obtain these, that they burrow in the ground, and throw up little hillocks of earth, in which latter act lies the offence for which their lives are taken. Our acquaintance with the habits of this animal is not sufficiently intimate to enable us to say whether the good which he does to man preponderates over the evil; but we would recommend the following extract from a late number of the *North British Agriculturist*, as calculated to lead to proper observations.

JAMES HOGG, better known by the cognomen of the "Ettrick Shepherd," in an interesting paper published in the *Quarterly Journal of Agriculture*, appears to be amongst the earliest advocates for the preservation of moles, a view also entered into by the Editor of that Journal, who questions whether the mole may not be a very important friend to the farmer. "This is by the destruction of grubs, wireworms, and the like. It is known that the mole is a very voracious creature. He subsists on worms and the larvæ of insects, which he finds under ground, where no other enemy can reach them; and, at night he sallies forth and pursues his prey on the surface. It is probable that he then destroys a vast number of grubs and other creatures, whose ravages would all be felt in their season. Can it then be that in destroying the mole we are guilty of the heedless destruction of a friend? The matter is worthy of more consideration than it has, perhaps, yet obtained. We think that a strong case has been made out in favor of the 'blessed little pioneer,' by our ingenious and kind hearted correspondent; and that in all the pastoral districts of the country, a verdict of 'not guilty' may be brought in in favor of the long-enduring mole. Let us hope, then, that henceforward he may be suffered to live in peace, and die of old age, in all the sunny glens and green sward knolls of Yarrow. But what will the insulted gardener say to this our care of his ancient enemy? 'He is a thief, he steals my acorns by the bushel, destroys my onion beds, and roots up my tulips.' Alas for the little culprit! Within the limits of the ravaged garden, we fear we must give him up to the vengeance of the trap. But on the wide spread surface of the fields, where there are no onion beds to ravage, and no tulips to be laid waste, and where little space is yet left for the denizens of nature to breathe and sport in, is it quite certain that all the mischief which the little mole works to our turneps and our mangel wurtzel is not paid to us with usury, by the prodigious multitude of larvæ and destructive insects which he consumes?" Several writers, within these few years, in the *Gardeners' Chronicle* and *Gardeners' Journal*, have taken up views favorable to the preservation of the mole, and even have gone so far as to purchase them at so much per head, and turned them out on their own lands.

It is no doubt, testing the temper of the enthusiastic florist in no small degree to find that this industrious engineer has, during the night, driven a tunnel through the centre of his tulip bed, and, peradventure, has upheaved a favorite prime Bagnet or Byblomen; still, it is very questionable whether, had not the mole taken that direction, no doubt in quest of food, that the wireworm or grub might not have done him triple the injury. In fields, we are persuaded of their advantage, and even in gardens we have ceased to disturb them; for were there not insects for them to feed upon, they would leave us and go elsewhere, and wherever moles abound there also abound the wireworm, a much more destructive enemy.

The farmers in Belgium are averse to their being destroyed, and probably the most unpopular act in our own life was the introduction of English mole traps into that country; and although upon a royal domain and at the command of majesty itself, all our endeavors to extirpate them proved unavailing, and the habits of a gardening and agricultural people were yielded to as an act of expediency.

In the gardens at Dalkeith there are two borders of equal size, in one of which a trap-bitten mole, (for when once nearly caught they are exceedingly wary afterwards,) had taken up its abode for nearly a year, and out of which it could only escape by coming up through the surface, as the foundation of the wall along one side with a large main drain under it, is six feet deep, the solid gravel natural to the soil being ten feet deep under the walk, formed the other side and ends of the border. The means of escape are at one end of the border, and, from the appearance of the hole, it is pretty frequently used; and by this we conclude that the mole passes out at night in quest of food on the surface around, and by it retreats again in the morning. Formerly both borders were so over-run with wireworms, that the crops were destroyed. In both we have this season set traps of sliced potatoes fixed to the end of wooden skewers, and have set an equal number, and at a depth of from three to four inches in each. These are examined by a person we have the highest confidence in every three or four days, and the result is—in the border inhabited by the mole, only two wireworms have been detected, while in the other, the total number taken at three examinations was 6360, the number of traps being 106; average number at each trap being 20, and at one taking 2120.

Comparative Profits of Free and Slave Labor.

In reply to the inquiry of "A Southerner," we published last month the remarks of "A Northerner." Having thus opened our columns to the subject, we are desirous of treating it with fairness, and therefore insert below, two other communications; with which,—as the most important points seem now to have been brought out,—we close the discussion.—Eds.

Eds. Cultivator—In the May number of *The Cultivator*, "A Southerner" asks for information on the subject of labor. Whether it would not be more profitable to employ free labor than slave? Another Southerner undertakes to answer the question promptly and unhesitatingly in the negative. There is no labor in this country so cheap as slave labor. There is no labor in this country so well adapted to agriculture, particularly on large farms, as slave labor.

"Southerner," on his farm of 1200 acres, could not afford to employ free labor at all; without he changed his cultivation of grain and converted his land into pasturage. He has 800 acres arable land. If he cultivates the four shift system, he has 200 acres in corn, 200 in small grain, and 400 acres in grass. To cultivate this quantity of grain, it will require from 15 to 20 field hands. He has the labor on his farm, and owned by him, and it is kept up perpetually by the natural increase of his slaves, so that it costs him nothing after the first purchase, but to feed and clothe them. There is no labor he could obtain so cheap to him.

Let us suppose "Southerner" instead of owning the slaves, (which is a decided advantage) had to hire them. Say 20 field hands, men, boys and women, were to be hired. They could be had in Virginia at an average of fifty or sixty dollars per year, depending of course upon the proportion of men to women. The men being worth more. Twenty hands at fifty dollars would cost,

Twenty hands at fifty dollars would cost,	$1000
Clothing and taxes,	200
Food,	400
	$1600

There are no physicians bills to be paid by the hirer, as they are paid by the owner.

Let us see now how it will be in estimating the cost of free labor. According to the Patent Office Report, which is held as good authority in such matters, field laborers are worth in Massachusetts, and several other northern states, from $10 to $12 per month. We will suppose 16 men to perform as much labor as 20 mixed hands. It will stand thus:

16 hands at say $11 per month, being $132 per year,	$2112 00
Cost of board, say $50,	800 00
Being cost of free labor,	$2912 00
do of slave labor,	1600 00
Difference of cost,	$1312 00

Thus it will be seen, that free labor will cost four-fifths more than slave labor, where each kind has to be hired. But where the farmer owns the slaves on his farm the difference is much more more decidedly in favor of slave labor.

"Southerner" says he has "a great deal of trouble, vexation and solicitude, on account of my (his) dependants." I can assure him that he will not find any situation in life free from its troubles and vexations. And I am decidedly of the opinion that there is as little trouble and vexation in the management of slaves as any other kind of laborers whatever. Suppose he were to substitute free labor for the labor of his slaves. Where would he obtain it? Necessarily from Ireland, as being the next cheapest to slave labor. Now I would ask him if he would not greatly prefer the management of twenty negroes on his farm, to the vexation and trouble of twenty Irishmen? I am sure he could not hesitate in his decision.

"Southerner" says, "we frequently see it stated in northern papers, that free labor is more profitable than slave, and that if southern people were to liberate their slaves, they would be more prosperous and happy." This is a very great error on the part of the northern people. The south is the most prosperous country in the world, and I presume equally as happy as any other people.

Its prosperity is mainly produced by the existence of slave labor. Without that species of labor, its fields would not be tilled, but suffered to be overrun by rank and poisonous weeds. The vast amount of agricultural products now annually exported from the south, would not be produced. Our northern brethren would be deprived of the great profits derived from their shipping and manufacturing interests. And the slaves themselves would be a wretched set of beings. As they are situated at present, they are the best fed, best clothed, most happy and contented body of laborers of any in the world. To our northern brethren we would say: if you prefer free labor we are perfectly satisfied with your choice. But as we prefer slave labor, all we ask of you, is to mete out the same measure to us, and let us alone. A Virginian. *Mathews Co., Va.*

Eds. Cultivator—Having read in the May number of your paper, what appears to me to be a very honest, interesting, and intelligent inquiry in regard to free labor, from the pen of "A Southerner," and considering that it merits a careful and faithful answer, I thought I would furnish you a few remarks in regard to it.

The object the gentleman has in view, is certainly a most laudable one; for it is impossible to conceive of a more noble desire, than that for the mutual improvement of the condition of himself and those around him. That he may receive such information as will assist him in the execution of his wishes, is my most fervent hope; and if these lines contain ought that is of value to him, I shall have attained my object.

I am sanguine in the belief, that by a judicious introduction of free labor, he will greatly diminish his "vexation and solicitude," as well as increase his annual income. A laborer, who feels that he is receiving a full compensation for his exertion, has a stronger and more powerful stimulant to activity than it is *possible* to present to the slave. Hence, the latter is characterized by his lethargic movements, and indolent habits,—evincing a total disregard for the interests of his master, and I imagine is, in some cases, a source of expense, rather than profit. And there can be no doubt that the intelligent and educated laborer is far superior to the ignorant, and much cheaper, even at a greater salary.

The experience of all those who have employed laborers of both grades, I am confident, will speak in affirmation of this opinion. But the most judicious manner in which the gentleman in question can substitute free, intelligent workmen, for his slaves, is a matter that cannot be decided without the most serious and thorough reflection. Whether he had better attempt to transform them into free laborers, or dispose of them either by selling them to southern planters, or giving them their freedom, and introduce free white labor from the north, is perhaps difficult to determine. I am satisfied that the adoption of either of these measures would be conducive to *his* interests. I would advise him to make some experiments, and give the results to his southern brethren, many of whom are similarly situated, and would be grateful at their reception.

I am of the opinion, however, that he will meet with more satisfactory success by disposing of his slaves as he best can, and bring free white laborers from the north. I doubt not, that he would hesitate selling them to the planters at the south; still I consider it preferable to the course he is at present pursuing. If he be an individual of fortune, and would not suffer any inconvenience from the loss of his slaves, I scarcely need remark that the purer feelings of his heart would at once dictate him to free them, when they are of a proper age.

Let this be as it may, at any rate dispose of them.

The number of free laborers required to till a farm of his description, in a manner decidedly superior to that at present, and with far more lucrative results, would not exceed twelve.

The foreman should be an individual of intelligence and education, and would demand a salary of $350 per year. The others, $125 each, most of whom might be sons of the Emerald Isle. This would make his annual expenses for labor on the farm $1725, which is no inconsiderable item, and may at first appear rather startling. But if we take the interest of the money invested in slaves, it will reduce this somewhat. He says there are some 60 or 70 around him, most of whom are slaves. Now, allowing that 56 are slaves, and supposing their average value to be $250, (I am unused to such estimations, therefore may be greatly in error, but think this low enough,) he will have $14,000 invested in slaves, the interest of which, at 6 per cent., would be $840.

Besides this, the number he will have to support will be reduced from 60 or 70 to 20 or 30, therefore the board of 40 will be saved, as well as the clothing of all, excepting his own family. The 40, at 35 cents per week for board, would cost $728 per year; and it is probable that the clothing averages $4 a-piece the year, which for the 56 would be $224.

Adding these items together, we find that his slaves cost him $1792 a year, which sum exceeds the enormous amount that free labor would cost, by $67. If the estimates were more accurately made, doubtless the difference would be far greater in favor of free labor. If this be the result, it might be asked, how would the gentleman's condition be materially improved? I answer; the number of attendants around him would be vastly diminished, and his "care and vexation" proportionally reduced. But besides this, he would with his free labor, adopt a new and improved system of agriculture, by which means the produce of his farm would be doubled and tripled; and the fields that are already waning under that ruinous system of culture that will eventually prepare them for augmenting the list of "*Virginia worn-out lands*," will be rescued and restored to their pristine fertility, by that more recent method of tillage, that causes even the granite hills of New England to smile with luxuriant verdure.

In regard to the question whether grazing stock for market or cheese-making is more profitable, I would say that it depends entirely upon the situation and circumstances. I do not recommend that the whole energies of any farm, (unless it be a very peculiar one,) be devoted exclusively to the production of any one article; for not unfrequently, one branch of husbandry meets with reverses when others are prosperous. Therefore, it might not be improper for him to devote a portion of his farm to the grazing of stock for market, and another to the dairy. A good dairyman could be obtained for $300 per year. The necessary fixtures for cheese-making, could be erected for a sum varying from $250 to $800, depending entirely upon their extent and economical construction.

Hoping that the gentleman will conclude to deviate from the time-beaten track of his ancestors, and free himself from the thraldom of slavery, which is twofold more injurious to the master than the slave, I cordially tender him my most sincere wishes for his success. P.

Germantown, Pa.

Mineral Cements.[*]

Roman Cement.—It is a remarkable fact, in the history of hydraulic mortars, which originates, as we have seen, with the Puzzolana and Trass[†] employed by the Romans, that the more the knowledge of their uses has been spread, the more substances have been discovered, which either act as hydraulic mortars themselves, or can be mixed as cements in the preparation of artificial mortar; so that what appeared originally a privilege accorded to a few favored spots only, can now be obtained almost everywhere. A strong inducement to study the nature and modes of occurrence of hydraulic lime, was created by the patent granted to Parker and Wyatt, in London, in the year 1796, for what they termed "*Roman cement.*" The materials employed in the manufacture of this cement, are the nodules, of an ovoidal or globular form, which are found in the London clay, and known by the name of Septaria. They are not confined to the banks of the Thames, but are also found on on the isles of Sheppey and Wight, as well as on the coasts of Kent, Yorkshire and Somersetshire. The composition of these nodules has already been given. They are calcined in perpetual lime-kilns with coal, in which a very moderate and well-regulated heat is carefully preserved. After calcination, the stones are ground under heavy edge-stones to a very fine powder, which is sifted and then packed in casks for sale.

In the year X of the French Republic, Lesage pointed out the existence of similar cement stones on the coast of France, near Boulogne, and Drapier proved their identity with the English, by chemical analysis.

Roman cement is one of the most powerful hydraulic mortars, and is exceedingly valuable, not only on account of the rapidity with which it hardens, and this is effected in a very few minutes, but because when hardened in considerable masses, it is not liable to crack.

Since that time, similar calcareous marls have been found in numerous places, wherever pains have been taken to look for them, and have been used for similar purposes. To give an instance of this, Kittle in Aschaffenburg, examined a series of limestones from the Spessart, and found in four different places in the neighborhood, limestone, which yielded a very tolerable mortar, and two varieties which were excellent. Hydraulic lime has occasionally been met with in the same quarry as fat lime; and its nature not having been investigated, has been neglected as useless in consequence of the slowness with which it is slaked.

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[*] From the second volume of Johnson's edition, of Knapp's *Chemical Technology*.

[†] Puzzolana and Trass, are porous volcanic, or pumice stones. Eds.

All artificial or natural hydraulic limestones are soluble (before as well as after calcination) in muriatic acid, with the separation of silica, except when sand or some similar substance has been added to them.

Practical Remarks.—The hydraulic limestones, when they do not contain a sufficient quantity of lime to be capable of slaking with water, must be very finely pulverised; it is only by this high state of division that a proper action can ensue. A thorough penetration of the siliceous portion by the lime is never entirely effected, but a certain proportion remains enclosed and removed from the sphere of action.

One point, which is very often neglected in preparing artificial hydraulic mortar, is the attention to the proper proportion between the slaked lime and cement. Both the ingredients must be mixed by measure or weight, and not merely estimated by the eye.

The best plan is to moisten the necessary quantity of cement first, and then mix the freshly slaked lime with it. The more uniformly and intimately both are mixed, the better is the result.

The hydraulic mortar employed in building the Eddystone lighthouse, was mixed by Smeaton from equal proportions of lime, slaked to powder, and Puzzolana. Trass and Puzzolana are generally mixed with half their weight of lime, as was the practice amongst the Romans. It is desirable to ascertain the best proportions by experiment in all cases where no certain knowledge of the nature of the two substances can be obtained.

Good hydraulic mortar, whether made from natural limestone or composed of lime and cement, should not show any tendency to crack when hardened under water, even when no sand is mixed with it. It then forms a very dense and solid mass, which, in a short time, neither suffers water to permeate it, nor is attacked by the water, but acquires a considerable degree of hardness. For this reason, it is well to use nothing but hydraulic mortar for those parts of walls which are constantly under water. If the mortar is not only required to harden, but also to bind well, a very important point must never be neglected, and that is to moisten the surfaces of the stones to which the mortar is to be applied. When this is not done, the surface of the stone (by its power of absorbing moisture,) dries the mortar and prevents proper adhesion from taking place. The joint then remains open to a greater or less extent.

It does not by any means follow, that because hydraulic mortar is the only durable material for building under water, it cannot consequently be used for dry walls. It is, on the contrary, of the greatest service wherever protection is required against the infiltration of moisture and damp; and dwellings or buildings can often be rendered very much less damp by a judicious application of a hydraulic coating; a layer of this kind, when once hardened, is not calculated, like ordinary mortar, to attract moisture and allow it to pass through. The hydraulic mortar must, of course, when used for covering dry walls or otherwise, be kept moist and watered, until it has acquired its proper degree of hardness. If this is not attended to, a soft, friable, useless coating is the certain result. If moisture enters from below, for instance, between the wall and the coating of mortar, it will continue confined there in consequence of the impenetrability of the latter, which, on the occurrence of a frost, will most certainly peel off and be destroyed. Care must also be taken that the mortar does not dry up of itself immediately in the air, in which case it contracts and cracks. It is, therefore, necessary to add sand or some other substance which obviates the shrinking. Hydraulic mortar will bear a very considerable quantity of sand without injury to its hardness, even as much as one and a-half times its own weight and more. This addition therefore, is important in an economical point of view. The grain of the sand employed, however, requires attention, as was the case with ordinary mortar; sharp, angular sand is decidedly preferable to blunt, rounded sand, and it is better to use a mixture of coarse with fine sand, than that the sand should be all of the same sized grain. The sand should likewise be as free as possible from earthy particles and dust. In mortar composed of lime and cement, the rule is, to proportion the sand to the quantity of cement used. Slaked lime will not bear more than a certain quantity of these substances, which quantity must not be exceeded, the cement itself being for the greater part inactive and playing the part of sand.

Hydraulic mortar that sets with sufficient rapidity, and to which a proper proportion of sand has been added, may be employed for casting tolerably massive objects, which are not subject to crack when dry. This enables hydraulic mortar to be employed for architectural ornaments which then combine great sharpness with durability, are very light as compared with similar figures of sandstone, and have the great advantage of being easily multiplied.

A similar application is that for casting water-pipes, on the spot where they are required, as proposed by Gasparin. The mould employed is a linen hose, like those attached to the fire engines, a few meters in length, which is filled with water and closed at both ends. A thick kind of bolster is thus produced, over which sand is sifted, and it is then laid upon a deposite of hydraulic lime and covered by pouring over it the same substance. When the whole has hardened, the hose is drawn forward, about the length of one foot, being left inserted in the tube, and a fresh length is cast. Water courses, thus constructed, must however, have a certain amount of fall, or the sand cannot be washed out, and will impede the delivery of the water.

When hydraulic lime is mixed with small stones, or with shingles from the bed of a river, or the sea, walls can be directly constructed of it, and a mass is obtained which resembles the erections with ordinary mortar, and is called *béton* by the French.

At Toulon, a mixture was used for the construction of the harbor, consisting of 3 parts lime, 4 Puzzolana, 1 smithy ashes, 2 sand, and 4 parts of rolled stones or shingles.

The great strength of walls, constructed with hydraulic mortar, is most clearly shown by the experiments undertaken with a view to break beams constructed of brickwork. A 25 feet long, and 2¼ feet wide beam, constructed with 19 layers of bricks, bound together by Roman cement, in which, here and there, parallel strips of iron were enclosed, was capable of bearing, when supported at both ends, a weight of 22 tons suspended from the middle, before it showed any signs of fracture.

Shoeing Horses.—At a meeting of the Royal Agricultural Society of England, Professor Sewall remarked, that he frequently found old horses shod with a layer of leather, forming an artificial sole between the hoof and the shoe, recovering from severe affections, causing injury to the hoof—such, for instance, as contraction, brittleness, and cracks, or even diseases of the foot itself, as thrushes, corns, cankers, etc., and permanently regain their original elasticity and firmness. ¶

TABLE

Exhibiting the Composition (expressed in pounds and decimals of a pound) of several kinds of Grain and Vegetables.

In answer to several inquiries, we are enabled to offer the following table, prepared by Mr. J. H. Salisbury, who will please accept our thanks for the favor. Mr. S. informs us that the composition of the oat was calculated from analyses made by Prof. Norton; that of the barley, millet, and inorganic part of the sweet potato, from analyses made by Prof. Emmons.

	Winter Wheat grain.	Rye Grain.	Two-rowed Barley grain.	Oat grain. Hopeton.	Millet grain.	Buckwheat grain.	Grain of the Rhode Island Sweet Corn.	Grain of the Tuscarora Corn.	Grain of the Chinese tree Corn.	Tuber of the Mercer potato.	Tuber of the Sweet potato.	Drum Head Cabbage.	Fruit of the Large Red Tomato.	Fruit of Egg Plant. Oval-shaped purple.
	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain
Starch,	613.300	527.60	330.71	656.40	337.30	415.60	149.918	459.6796	485.3941	96.50	184.23	......	......	4.9220
Albumen,	44.720	24.40	32.48	4.60	80.24	65.50	120.739	77.9791	59.8789	2.49	64.47	17.40	1.831	3.4383
Coagulable Albumen,	......	22.50	......	......	......	98.70	2.186	1.2077	12.2024	......	19.40	8.80	2.851	13.1465
Casein,	2.730	4.00	17.02	158.60	16.65	7.80	24.467	1.5527	1.6561	4.68	9.70	3.60	1.805	2.6967
Gluten,	44.600	11.30	20.29	24.80	40.40	26.00	......	......	......	2.05	......	......	......	......
Zein,	......	......	......	......	......	......	34.137	44.5964	34.6025	......	......	......	......	......
Tartaric, citric and malic acids,	......	......	......	......	......	......	......	......	......	......	......	98.20	28 948	......
Sugar and Extract,	115 750	80.30	56.62	45.60	98 68	60.10	193.216	87.7265	92.9025	26.34	53.49			40.9900
Oil and Fatty matter,	10.500	63.80	19.15	54 90	20.00	4.70	91.731	45.8900	38.6991	0.84	......	1.60	......	......
Wax,	......	......	......	......	......	......	......	......	......	......	......		4.769	......
Dextrine and gum,	24.000	20.40	63.16	21.20	40.80	16.00	114.433	36.6605	38.2632	12.63	6.98	10.90	8.806	4.9889
Fiber,	34.100	111.40	175.91	11.90	195.65	140.90	118.973	107.3075	108.0012	57.59	17.09	30.90	......	10.2476
Chlorophyl, with a little starch,	......	......	......	......	......	......	......	......	......	......	......		......	......
Bran,	......	......	140.50	......	......	......	......	......	......	......	......	......	......	......
Gum resin,	......	......	......	......	......	......	......	......	......	......	2 07	......	......	......
Water,	93.800	124.00	108.16	......	107.28	128.80	136.600	122.2000	113.6000	791.09	641.72	826.20	947.58	913.5300
Amount of organic bodies and water,	983.50 lbs	989 70lbs	964 .lbs.	978.lbs	966.lbs.	964 lbs	977.4 lbs.	984 8 lbs.	985.2 lbs.	994.01 lbs.	989.10 lbs.	991 60 lbs.	996.59 lbs.	993.96 lbs
Carbonic acid,	......	......	......	......	......	......	......	......	......	......	......	......	0.3817	0.2889
Silicic acid,	0.309	0.392	8.64	0.42	15.63	0.72	0.256	0.1178	0.2536	0.25	0.24	0.06	0.0606	0.1038
Sulphuric acid,	0.162	0.495	......	......	trace.	0.57	0 135	0.1938	0.1594	0.36	0.16	1.12	0.0611	0.2898
Phosphoric acid,	8.856	......	......	11.06	......	18.19	10.177	6.8586	7.3100	......	......	1.27	0.8491	1.7595
Peroxide of iron,		......	......	0.19	......					......	......	......		
Phosphate of peroxide of iron,	......	0 668	15.14	......	12.19	......	......	......	......	......	......	0.12	......	......
Phosphates of lime and magnesia,	......	3 635		......		......	......	......	......	2.23	2.78	......	......	......
Phosphates of potash and soda,	......	0.694	5.88	......	0.22	......	......	......	......		......	......	......	......
Lime,	0.009	0.707	......	1.20	......	1.11	0.076	0.0509	0.0918	0.01	0.08	0.29	0.0026	0.0046
Magnesia,	2.703	0 127	......	1.95	......	5.67	2.954	1.9670	2.4075	0.04	0 07	0.35	0.0549	0.0828
Potash,	1.302	1.922	4 36	7.10	2.53	7.76	2 966	2 2045	1.9212	0.78	6.37	2 09	0.7191	1.2496
Soda:	3.075	0.988	1.98		2.91	0.86	5.301	3.2029	2.2849	1.45	0.66	3 02	0.8899	1.9525
Sodium,	0.033	......	......	......	......	......	......	......	......	......	......	......	0.0952	0.0686
Chloride of sodium,	......	0.076	......	0.08	......	......	......	......	......	0.67	......	......	......	......
Chlorine,	0.051	......	......	......	trace.	0.12	0.061	0.0684	0.0651	......	0.54	0.08	0 1472	0.1057
Organic acids,	......	0.694	......	......	0.52	1.01	0 684	0.5361	0.3065	......	......	......	0 1576	0.1341
Amount of inorganic bodies,	16.500 lbs.	10.3 lbs	36.lbs	22.lbs.	34.lbs.	36.lbs	22.6 lbs.	15.2 lbs.	14.8 lbs	5.79 lbs.	10.9 lbs.	8.4 lbs.	3.41 lbs.	6.04 lbs
Total,	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.

Improvement of the Soil.

Renovation of Lands.

EDS. CULTIVATOR—It appears as though there was an absolute ignorance amongst farmers, of the relative value of the various kinds of manures; and especially so amongst those whose means enable them to have acquired the most accurate information. Is there any one who can even tell us how much more he will raise from an acre of land manured with six cords of stable manure, throughout a course of farming for four or five years, than he would from the same land not manured at all? Can any one tell what increase will result from liming land? Or can any definite result be predicated from the application of bones, poudrette, guano, or any of the various kinds of fertilizers now in use? That the application of these various manures will produce a great effect is known to us all; but which will soonest repay the cost, which last the longest, or which will best suit the various kinds of soils, is as yet a mystery to the generality of farmers.

But enough of this carping and fault-finding. And that I may practice as well as preach, I will give you a short history of some of those who, I think, have pursued the true system; even though, according to some learned Thebans, it is one that will not pay.

Nearly twenty years since, there was a farm of about sixty acres, so poor as almost to defy description. The best comparison I could give, would be some of the worn-out, or as they call them, the "tired lands" in the southern states. The owner was a young lady, and she attempted to manage the farm when it came into her possession, in the same manner as it had been managed by those from whom she inherited it—without having any pecuniary means, other than its resources. She hired a farmer, and for some years they plowed and re-plowed the same worn-out and exhausted fields, and gathered in the same poverty-striken crops, which had been gathered in, "from a time beyond which the memory of the oldest inhabitant runneth not to the contrary." The result was as all foretold, she was compelled to quit farming. Amongst her creditors was her farmer, I believe almost the only one of any magnitude, and to *pay him off* she married him,—at least so the story went. Again they started fresh with the world; but still it would not do. The same incubus was pressing upon them. They toiled early and late, lived prudently and economically; but notwithstanding all, they could not make both ends meet, and were fast coming out of the little end of the horn. Their true friends urged them to raise money on the lands and improve it, so that at least, they might be paid for their labor; but this, although the only true policy, was a policy running counter to all their preconceived opinions. They said, as others before them have said, it would not pay. At last they did what under the circumstances, and with their views of policy, was perhaps the only prudent thing they could do—they so'd the property.

It was purchased by a hard-working practical farmer, one who had previously had some experience in renovating worn-out lands. The price given was, I think, sixty dollars per acre,—hardly the value of the buildings upon it. Instead of doing as his predecessor had done, he mortgaged it, for a part of the purchase money, and took the balance of his means to improve the soil. In order to effect this object, he hauled stable manure from the city of Philadelphia, a distance of ten miles, for which he paid about three dollars the two-horse load; that is, what two horses could draw on the pavement, and three or four off. I cannot give the quantity he put to the acre; I think it was five or six of these loads. He continued this practice for some six or eight years, at the end of which period, he was offered more than twice what he gave for the farm.

It is hardly necessary to say, it was then a farm of altogether a different character. Old fields, which formerly produced nothing but sorrel or moss, were then verdant with the richest grasses, or covered with the most luxuriant crops; old fruit trees, which had been, under the former owners considered as almost worthless, then sprung into new life, and brought forth excellent fruit. And everything, both animal and vegetable, betokened prosperity and abundance. All this was effected, mark you, whilst at the same time, the owner was yearly making his living from its proceeds. It has been but a short time since his son told me, they made money faster then, than at any other time; "because," said he, "although we did not lay by any money, yet every year our land was becoming more and more valuable. The owner, now an old man, is living independently and comfortably; he has the fattest horses, the best cows, and the finest crops of any one around him.

In my last communication I mentioned an Englishman, who farmed Mr. W.'s farm. He is one of my standing examples of the benefit of this system of farming. About ten years since, he, then a hired farmer, leased from a Mr. S. in Philadelphia, who kept a livery stable, a miserably poor farm, with a bleak northern exposure, on Chestnut Hill, near Germantown. The conditions of the lease were that Mr. S. was to find the manure, and that Mr. H. (the farmer,) was to cart it to the farm. He had saved from his hard earnings, a few hundred dollars, barely sufficient to purchase a few of the most indispensible farming implements. You can judge how limited his resources were, from the fact that the loss of one of his horses threw him on his "beam ends," until his friends advanced him money to replace his loss. But he boldly met the disheartening circumstances of his situation; and, as he afterwards told me, it was as much as he could do, with the most rigid economy, to keep himself from sinking. To use his own words:—Whenever he could get a day's work for himself or his boys, from his neighbors, he took it, and thus earned a little money for his family, and when he could not, he would haul up a load of manure from the city. When I last saw him, some three years since, he was surrounded by all that a farmer could desire; his yard was stocked with fine cattle, his horses were *excellent*, and in fine condition; his implements were *good*, and *in* their places; and to sum up all, he had the appearance of being a forehanded farmer, and one "well to do" in the world. It really made my heart glad to see this man, whom I had known, as a stranger in a strange land, and toiling day by day for his daily bread, now comfortable, independent and happy; and taking rank in his social position, with those who form the most numerous and respectable portion of the community.

A farm, which is, perhaps, the very best in this county, was made so, by following the method I have pointed out. Many years since, Mr. C., who had been an orphan boy, had some money left him by the person who brought him up. With the money, he purchased a piece of land about eight miles from the city, containing about thirty acres. When he purchased it, it was thin, and if not in the lowest condition to which it might have been reduced—yet too poor for any one to make money from it by farming in the usual manner. He also, pursued the same system, and though some may have deemed him unwise, the result was, he made his living from the land, whilst at the same time he was changing its appearance. It would be fruitless to attempt any description of the high degree of fertility to which it has now been raised. You can form some idea of its productiveness when you learn, that for years past, he has been putting by his five hundred or a thousand dollars a year, clear money, after all his farming expenses have been paid. Nor does he live in a miserly manner; but on the contrary, is rather famed for his liberality in household matters. It is a fact well known in the neighborhood, that he raises as much from this small lot of land, as is raised by the average of those who cultivate their hundred acres. This result has been produced, solely by the use of stable manure. He keeps no fancy stock; he pursues no different routine of cultivation from that pursued by others around him; but he manures his land's without stint.

If it were not that it would be trespassing on your columns, and on the patience of your readers, I could give you instances by the score, where some, who have not been afraid either of the labor or expense of doing as those I have mentioned have done, have succeeded in renovating their worn-out fields, and are now living comfortably upon the income of their productive farms. And where others, who were afraid it would not pay—that the price of the manure was too high,—the labor of procuring it too great, have continued in the same situation in which they were when they first started out in life. PENNEPACK. *Lower Dublin, Pa.*, 1849.

New-York State Agricultural Society.

State Fair.

We make the following abstract of the report of the Executive Committee, at the meeting of the Board, July 12th, 1849.

The secretary reported that since the last meeting he had visited Syracuse, and that the citizens are taking active measures to prepare the grounds and buildings for the use of the society in September. A contract for enclosing the grounds, and preparing the necessary erections, has been made with an efficient and thorough business man, and everything required by the Society, it is believed will be in readiness. The committee of arrangements on the part of the citizens, are making every possible effort for the accommodation of visitors, and nothing on their part will be left undone to accommodate those who may be in attendance.

The secretary also reported, that the judges who had been appointed for the annual exhibition, had with very few exceptions, signified their acceptance, and the few vacancies had been supplied by gentlemen who had agreed to be present. At no former period have the indications of a large exhibition in all the departments, been so encouraging as at the present.

T. Ewbank, Esq., Com. of Patents, in answer to an invitation to attend the Show and Exhibition at Syracuse, writes:—"An occasion so peculiarly attractive to those who watch with interest the progress of agricultural improvement,—a subject, the vast importance of which it is scarcely possible to magnify—could not fail to afford me the liveliest gratification—a gratification which, with what sincere regret I need not say, my official duties will, I fear, compel me to forego.

"I shall derive much pleasure, however, from reading reports of the Exhibition, which will, in some measure, atone for the disappointment I feel in not being able to meet personally, the many intelligent gentlemen who will assemble from various parts of the country, upon so interesting an occasion."

THE CROPS. &c.—N. Goodsell, of Rochester writes: That he had visited several counties of the north, and that considerable portions of Jefferson, Lewis, and Oswego counties, are becoming rich in agricultural products—some of the best dairies and finest stock are found in the above districts; but there is great want of information respecting our State Agricultural Society's proceedings. Many farmers with large dairies, have never attended a State Fair. I obtained from one nearly a full promise that he would take a wagon load of butter and cheese to Syracuse. Much of the country in these counties is very fine for grass, oats, barley, Indian corn and potatoes, superior to the major part of this State. I have made particular examination of the extent of our Peach district, east, and find it reaches upon the lake for six miles back to Salmon river, lowest range of thermometer 8° below 0, in all of which territory trees are as healthy, and as well filled with fruit as at Rochester. Two miles north of this line the thermometer falls 20° below 0°.

R. Howell, of Nichols, Tioga county, says, date 26 June, the weather for the last week, has been as dry and warm as any ever experienced here. Spring was very late, cold and dry, particularly the month of April. The 14th of the month the ground was so dry that it was scarcely possible to plow—and a week from that time so cold that the plow was frozen in the furrow. On the 17th it snowed, and on the hills snow was 16 inches, and half that depth on the flats. The crops now look fine, wheat is of fine color, large growth. It was feared that the Hessian fly had committed ravages upon the crop—but I cannot find any signs of the fly. In some grounds, injury has been caused by a grub eating off the large roots of the wheat. Rye much better than usual. Corn and oats are good, though backward. Grass is very heavy, especially new meadows.

John Johnston, Esq., of Seneca county, one of our best farmers, writes, June 25th, "I have made nearly 1500 rods of tile drains since you was here last fall, (in Sept.,) and am carrying on farming more thoroughly than ever I did; but am warned by age and infirmity that I must do less. I fattened 83 head of cattle last winter, have sold 62 of them, part in February and part in May, at over $50 per head—(steers 4 years old last spring.) Eighteen of these I have on hand, and they are worth over $50 each. I get well paid for my corn, hay, corn stalks &c.; and I have got such a lot of rich manure as few men in Western New-York ever made in one season.

"Some of my neighbors who said I must be a great fool to bury so much money in drains, are now ordering tiles, some 2,000, some 5,000, &c. Draining will do more to improve the agriculture of the State than all else combined. The difference in the cost of cultivating drained land, from that undrained, is very great. Drained land can be worked much earlier in spring, and the work much easier for man and team. *One plowing* will pulverize the land better than *three plowings* when the land is inclined to wet, even if not very wet.

"I have now laid (or at least have the drains dug, though all the tiles not home yet) about 40,000 tiles since 1841. What I laid previous to that time I have no account of, but it was not many. A little over 13 tiles will make a rod, of course, I have laid a great many rods for an American farmer. I think I have about half done what I intend to do; if I have tolerable health, I can, in three years, lay 40,000 tiles, and there is no difficulty in obtaining men to dig the drains."

"Mr. J. says:—"The weevil (wheat midge) has made its appearance among our wheat crops, more especially in the east and north of our county, immediately in this neighborhood. I think there will be no serious loss this season."

A letter from John Delafield, Esq., President Seneca Ag. Society, gives us the agreeable intelligence that the efficient society of that county, have passed a resolution inviting Prof. Johnston to deliver their annual address on the 5th of October next. Mr. D. also writes that it is probable the society will, if practicable, secure Prof. Johnston to deliver them a course of lectures on agriculture.

[We are much gratified by this movement on the part of this Society. It shows that the right spirit is abroad, and that the farmers of this small county are alive to their own best interests. It is to be hoped that some of our larger counties with funds idle in their treasury, will make a like arrangement, which will return tenfold more to their societies, in the benefits to agriculture, than the small amount required to secure the services of Prof. J.]

Letters were read from the officers of several Canadian Agricultural Societies, from the officers of the Board of Agriculture of Ohio, and from the societies of other states, giving notice of the appointment of delegates to attend the exhibition and fair of the N. Y. State Society, at Syracuse.

The Veterinary Department.

Spaying Cows.

At the request of a correspondent, we give the following extract, in regard to the operation of spaying cows, from a lecture of Morin, a French veterinary surgeon:

'Having covered the eyes of the cow to be operated upon, we place her against a wall, provided with five rings firmly fastened, and placed as follows:—the first corresponds to the top of the withers; the second to the lower anterior part of the breast; the third is placed a little distance from the angle of the shoulder; the fourth is opposite to the anterior and superior part of the lower region, and the fifth, which is behind, answers to the under part of the buttocks. We place a strong assistant between the wall and the head of the animal, who firmly holds the left horn in his left hand, and with his right, the muzzle, which he elevates a little. This done, we pass through and fasten the end of a long and strong plaited cord in the ring, which corresponds to the lower part of the breast; we bring the free end of the cord along the left flank and pass it through the ring which is below and in front of the withers. We bring it down along the breast behind the shoulders and the angle of the fore leg, to pass it through the third ring, from there, we pass it through the ring which is at the top of the back; then it must be passed around against the outer angle of the left hip, and we fasten it, after having drawn it tightly to the posterior ring by a simple bow knot.

'The cow being firmly fixed to the wall, we place a cord, fastened by a slip-noose around its hocks to keep them together in such manner that the animal cannot kick the operator, the free end of the cord and the tail are held by an assistant.

'The cow, thus secured, cannot, during the operation, move forward, nor lie down; and the veterinary surgeon has all the ease desirable, and is protected from accident.

'M. Levrant advises that an assistant should hold a plank or bar of wood obliquely under the teats and before its limbs to ward off the kicks; but this method is not always without danger, both to the operator and the animal, because, at the commencement, that is, when the surgeon makes the incision through the hide and the muscles, the cow makes such sudden movements, and tries so frequently to strike with its left hind foot, that it may happen that upon every movement, the plank or the bar may be struck against the operator's legs.

'On the other hand, although the defence may be firmly held by the assistant, yet it may happen, that in spite of his exertions, he sometimes may be thrown against the operator by the movements she may attempt, and there may be an uncontrollable displacement of the plank or bar; and then it may happen that she becomes wounded, and at the same time prevents the operation, while, by the mode we point out, there is no fear of accident, either to the operator or the beast.

'In case of the want of a wall provided with rings, we may use a strong palisade, a solid fence, or two trees a suitable distance apart, across which we fix two strong bars of wood, separated from each other, according to the size of the cow.

'There is another means of confining them that we have employed for some time past, where the cows were very strong and irritable, more simple than the preceding, less fatiguing for the animal, less troublesome to the operator, and which answers perfectly. It consists—

'First. In leaving the cow almost free, covering her eyes, holding her head by two strong assistants, one of whom seizes the nose with his hand and strongly pinches the nostrils, whenever the animal makes any violent movements during the operation.

'Second. To cause another assistant to hold the two hind legs, kept together by means of a cord passed above and beneath the hocks; this assistant also holds the tail and pulls it, whenever the animal seeks to change its place.

'The cow being conveniently disposed, and the instruments and appliances, such as curved scissors upon a table, a convex edged bistoury, a straight one, and one buttoned at the point, suture needle filled with double thread of desired length, pledgets of lint of appropriate size and length, a mass of tow (in pledgets) being collected in a shallow basket, held by an intelligent assistant, we place ourselves opposite to the left flank, our back turned a little towards the head of the animal; we cut off the hair which covers the hide in the middle of the flanks, at an equal distance between the back and the hip, for the space of thirteen or fourteen centimetres in circumference; this done, we take the convex bistoury, and place it opened between our teeth, the edge out, the joint to the left; then, with both hands, we seize the hide in the middle of the flank, and form of it a wrinkle of the requisite elevation, and running lengthwise of the body.

'We then direct an assistant to seize with his right hand the right side of this wrinkle; we then take the bistoury that we held in our teeth, and we cut the wrinkle at one stroke through the middle; the wrinkle having been suffered to go down, a separation of the hide is presented of sufficient length to enable us to introduce the hand; thereupon we separate the edges of the hide with the thumb and forefinger of the left hand, and in like manner, we cut through the abdominal muscles, the *iliax* (slightly obliquely) and the *lumbar*, (cross) for the distance of a centimetre from the lower extremity of the incision made in the hide; this done, armed with the straight bistoury, we make a puncture of the peritoneum at the upper extremity of the wound; we then introduce the buttoned bistoury, and we move it obliquely from above to the lower part, up to the termination of the incision made in the abdominal muscles. The flank being opened, we introduce the right hand into the abdomen and direct it along the right side of the cavity of the pelvis, behind the *cul de sas-rumen* (paunch) and underneath the rectum, where we find the *cornes de l'uterus*, (matrix;) after we have ascertained the position of these viscera, we search for the *ovaries* (organs of reproduction,) which are at the extremity of the *cornes*, and when we have found them, we seize them between the thumb and forefinger, detach them completely from the ligaments that keep them in their place, pull lightly, separating the cord, and the vessels (uterine or fallopian tube) at their place of union with the ovarium, by means of the nail of the thumb and forefinger, which presents itself at the point of touch; in fact, we break the cord and bring away the ovarium.

'We then introduce again the hand in the abdominal cavity, and we proceed in the same manner to extract the other ovaria.

'This operation terminated, we, by the assistance of a needle, place a suture of three or four double threads waxed, at an equal distance, and at two centimetres, or a little less from the lips of the wound, passing it through the divided tissues, we move from the left hand with the piece of thread; having reached that point, we fasten with a double knot, we place the seam in the intervals of the thread from the right, and as we approach the lips of the wound, we fasten by a simple knot, with a bow, being careful not to close too tightly the lower part of the seam, so that the suppuration which may be established in the wound, may be able to escape.

'The operation effected, we cover up the wound with a pledget of lint, kept in its place by three or four threads passed through the stitches, and all is completed, and the cow is then led back to the stable.

'It happens, sometimes, that in cutting the muscles, of which we have before spoken, we cut one or two of the arteries, which bleed so much that there is necessity for a ligature before opening the peritoneal sac, because, if this precaution be omitted, blood will escape into the abdomen, and may occasion the most serious consequences.'

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

The New-York and Buffalo Fruit Conventions.

From the various articles which have appeared in *The Horticulturist*, and other periodicals, it appears quite evident there is a very erroneous opinion abroad, as to the friendly attitude of these two conventions. From considerable knowledge of both, we believe the assertion may be safely made, that not five persons, having any connexion with either, desire any rivalry, or wish to assume any hostile attitude towards the other.

Both conventions had been proposed some months before their actual session, and both were very interesting and important bodies The writer, who took a much more active part in that at Buffalo, will not from this fact, be accused of partiality when he states that the New-York Convention embraced by far the larger number of eminent pomologists, and for this alone, must by common consent, be regarded as the leading pomological organization in America. It is but justice to those who took an active part in the convention at Buffalo, to state that nearly if not quite all of them so regard the New-York organization. And with this general feeling pervading all parties, we cannot but believe that the approaching convention at Syracuse, will adopt such a course as cannot be construed into an assumption of any hostile bearing.

A single explanation as to the propriety of two distinct conventions—for the east and west, as demanded by the differences of soil, climate and locality. The following facts would indicate that this difference is overrated. Of the *twenty-seven* varieties of the apple, recommended as first-rate by the Ohio Fruit Convention, held last year at Columbus, all except *four* are cultivated in the Eastern States, where even one or two of these four originated. As for the Buffalo Convention (held at the extreme western point of the State,) being peculiarly adapted for the west, it may be stated that the best and most extensive collection of pears, by far, exhibited at that convention, was from Robert Manning, of Salem, Massachusetts; the most extensive collection of plums, by far, was from Charles Hamilton, of Orange Co., N. Y.; and the largest collection of apples was from Charles Downing, of Newburgh, N. Y. We think it will hardly do, yet, for either section to cut loose from the other.

Inquiries.

SWEET APPLES.—Will you inform me of the best varieties of *sweet apples*, to ripen in succession to cultivate for stock feeding? *A. Williams, Gaylesburg, Ill.*

For Summer,—Bough and Golden Sweeting.

For Autumn,—Jersey Sweet, Summer Sweet Paradise, Haskell Sweet.

For Winter,—Danvers Sweet, Tallman Sweeting, Sweet Russet of Western N. Y.

Long-Keepers,—Hartford Sweeting, Green Sweeting. The Ladies' Sweeting is a fine and beautiful apple, a most abundant bearer, and a long keeper, but the growth of the tree is too slow to adapt it for stock feeding.

PEAR ORCHARDS.—I have just finished planting a pear orchard of over one thousand trees, mostly large seedlings, which I intend to graft in the top; please let me know your opinion about this method—will the trees be as hardy as when grafted at the ground?—I propose putting three to six grafts into each tree, or enough to fill the principal limbs. *H. Avery, Burlington, Iowa.*

Seedling pear trees usually furnish hardier trees than a large portion of the grafted varieties, and hardier trees would probably in most cases be obtained by grafting the seedlings at standard height, as proposed. If the stocks are already of considerable size, the grafts would make a more rapid growth, and sooner come into bearing. But on the other hand, this rapid growth would render them more liable to destruction by the cold of winter, or to death by frost-blight, which should be guarded against by avoiding summer pruning, or any other cause tending to produce a late growth of wood, and by placing them in a deep, moderately dry soil, which shall furnish a uniform supply of moisture through the summer, and favor the thorough ripening of the young wood before winter.

MARKET APPLES.—What are the best five varieties of apples for an extensive orchard for shipping? Is the Tewksbury Blush one of them? *A Western Fruit Raiser.*

Apples for distant market should not only be such as would keep well, but should be of the finest quality, so as to bring the highest price, and thus avoid as much as possible the contingency of the expenses of transportation consuming the profits. Hence the Baldwin and Rhode Island Greening, though so well adapted to New England and New-York, may not do well for the west where their quality more or less deteriorates. The Tewksbury Blush, although an admirable keeper, and very productive, is small, and not quite first-rate in quality. It has been found very profitable in the neighborhood of Philadelphia. Perhaps the following may succeed best for the western states:—Red Canada, or Old Nonesuch, Roxbury Russet, Newtown Pippin, (on strong lime soils,) Northern Spy and Jonathan.

SENDING BUDS BY MAIL.—How long will buds keep fresh and good, packed in the best manner? *A Williams, Galesburg, Ill.*

The period varies with circumstances, and with the kinds. Well-ripened shoots, of compact or horny growth, as the Gravenstein apple, and Summer Bonchretien pear, if kept moderately moist, will remain in good condition often two or three weeks or even much longer. But early-cut buds, of the peach, cherry, and other spongy kinds, may not keep half that time. As a general rule, buds cut near the close of summer will remain uninjured nearly twice as long as when cut five or six weeks earlier. Cool weather is more favorable than hot. Buds of any sort should not be usually cut, unless sufficiently matured to keep safely for five or six days.

Buds may be sent by mail in a letter, by wrapping them closely in thin oil-silk, so as to enclose perfectly all the moisture; or they may be preserved in larger packages for express, in fine, moderately moist sawdust, but not so large as to favor fermentation, which would spoil them.

Strawberries—Extracts from Correspondence.

The diversity of opinion relative to the merits of different varieties of the strawberry, is doubtless owing to the peculiarities of climate as well as of culture. The results obtained by experienced cultivators in different localities, hence become valuable in enabling us to assign to each variety its true position:—

F. R. Elliott, of Cleveland, Ohio, says "I regard the variety known as the *Willey*[*] as being superior in all respects for general culture. As regards its productiveness, I consider it a variety that will yield, when grown in common soil, and with common every-day, kitchen-garden care, two quarts to one, of any other variety I have tested, except the *Dundee*. In size, it is only medium between Hovey's Seedling and Old Scarlet. Next to this in point of productiveness, (as grown in common garden soil,) I consider the Dundee. Next, *Hovey's Seedling*; and this variety, if given *extra stimulus* in soil and culture, will yield a large product. But such can rarely be looked for, and as it is somewhat tender, not well withstanding winter rigors unless slightly protected, I do not regard it valuable, except where the same stimulus is given it which was given the original plants in Hovey's garden. *Burr's Seedling* [staminate] is a fine fruit, of size between Hovey's and Cincinnati Hudson, of a good flavor, and bears about the same as Ross' Phœnix. *Myatt's Eliza* I regard as the best and highest flavored berry grown, but two years' trial have induced doubts as to its productiveness.[†] In flavor, it has no equal..

A. H. Ernst, of Cincinnati, (President of Cincinnati Horticultural Society, has favored us with the following remarks on some celebrated varieties:—"The *Black Prince*, of which so much has been said, has disappointed us very much; the plants are not hardy enough for our hot summers' sun, and changeable winters. It cannot, therefore, be worth much to us. *Jenny's Seedling* has proved perfectly hardy, a prolific grower, late bloomer, large trusses of medium but uniform sized fruit, with a sharp acid, but fine flavor. The flesh is firm, which is a desirable point for a market fruit. I think it will prove one of the best of the numerous sorts. It is a pistillate, originating at Boston. *Burr's new strawberries*, as with most other new sorts, have been overrated. His *New Pine*, I think, will prove a great disappointment, as it is *hermaphrodite*, that is, having pistils and stamens in the same bloom. It will fruit, but this can never be so large or so numerous as that of a pistillate.[‡]

"*Our Old Hudson still stands unrivalled* for the market gardener. No other sort, with the rude treatment it receives, will produce so much large and fine fruit. This is quite a consideration in a country where the refinements of cultivation have as yet hardly made an entrance."

Thomas S. Pleasants, an eminent practical horticulturist of Petersburgh, Va., says, "This fruit attains to great perfection in this climate, and is of the easiest culture. The most productive varieties are the *Scarlets*, the organs of which are, I believe in all cases, perfect. *Hovey's Seedling* sometimes bears great crops, but not uniformly. *Keene's Seedling* is a shy bearer, but the fruit is enormously large. All productive kinds do well.

Dr. W. D. Brinckle, of Philadelphia, says, "The *Early Scarlet*, *Hudson*, and *Hovey's Seedling*, are the kinds chiefly cultivated here, and are fine varieties. Still finer are the true *Keene's Seedling* and *Ross' Phœnix*, but they are unproductive and too tender for our climate."

Management of Young Apple Orchards.

The following mode of treatment of a young apple orchard, transplanted in the spring of 1848, by which all lived and made a vigorous growth, has been furnished by J. Talcott, of Rome, N. Y.—

Last year the ground was planted with potatoes; in the fall, after the crop was off, it had a heavy top-dressing of horse manure, drawn from the village and plowed under. The trees were earthed up to protect them from mice. This spring, the ground was cross-plowed, and it is now sown to carrots, parsnips, onions, and some beans planted among them; the ground has been forked around the trees for a circle of about five feet. They are making a fine growth. The stems have been washed with diluted soft soap.

Horticultural Items.

Tender Shrubs.—D. Thomas, in his Buffalo Address, says, "Some shrubs suffer much from exposure to cold winds. In the open ground, the White Antwerp raspberry has been much injured—while ten rods under the lee of red cedars, it has done well. The common laburnum may illustrate the same doctrine. One which stood in a door-yard, exposed to the west winds, was damaged every winter, until a building was erected very near it, so as completely to shelter it on that side, and from that time, during seven years, it has not been injured."

Shade Trees.—Hill's Monthly Visitor states that two elm trees, two inches in diameter, were transplanted in 1836, and in 1847 were 45 inches in circumference, or 14 inches in diameter. The elm in that region is of very rapid growth. In a less favorable locality, a gentleman has raised elm trees with little care, five inches in diameter in eleven years, from seed. On account of the better and thriftier growth of seedlings raised in the garden, some have found that shade trees could be obtained as soon from seed, as by transplanting from the woods. This is the season for looking out for the seed.

Fruit at the South.—A correspondent of the *Southern Cultivator* (Ga.) says, "There are annual importations of fruit trees of the choicest varieties, from France and England, and from the Northern States. I have planted apples, pears, plums, apricots and almonds from France, and peaches and nectarines from the North; and of the whole, there is not one tree that has borne fruit equal in quality or quantity to our common native kinds." This is, doubtless, generally true—there are, however, a very few exceptions.

The attempt has been made to introduce exotic grapes largely at the South, with the belief that they would be peculiarly suited to the milder climate of that part of the country; but for out-door culture, they succeed even worse than at the North, being eminently liable to the rot and mildew.

European Nurseries.—According to the statements of P. Barry, some of the most eminent European nurserymen, particularly on the continent, have been in the practice of growing trees for sale, for the last half century, without knowing by sight half a dozen of the hundreds in their catalogues. A large and noted establishment, which has sent trees largely to nurserymen in this country, it appears, does not raise a single tree, but purchases at reduced prices from smaller nurseries. No wonder then, that so *large a majority* of the trees sold from most establishments here, should either prove misnomers, or of second or third quality, for without a continual check, by proving the sorts, errors must multiply and continue to multiply to a considerable extent, as they have done.

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[*] And which closely resembles the *Old Hudson* of Cincinnati.

[†] We have found it so unproductive as to be of no value.

[‡] In Western N. Y. it has proved very productive, but needs further trial.

Planting and Building.—It was very just remark of an eminent author, "the works of the person who builds begin immediately to decay; while the works of him who plants commence immediately to improve." Lord Bacon also remarked, "When nations arrive at civility and elegancy, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

Curious!—A neighboring periodical of high standing, soberly copies a story of grafting the grape, by splitting the shoot and bud in half, from a white grape vine, and joining it to a corresponding half from a black grape vine, which after great difficulty was made to grow, and yielded white and black fruit on the same bunch, and others variegated. Now, the most feeble glance at the laws of vegetable growth, should satisfy any person, that if two buds, cut right through the heart, could, after such formidable mutilation, be made to grow, one whole side of the vine, branches and all, would be the white, and the other side, the black variety, as much so as if two distinct grafts or buds were set, without thus cutting them.

Weeds in Gravel Walks.—An English gardener, has for more than ten years past, kept down the weeds in gravel walks, without any apparent bad effect, by sprinkling over them annually dry salt, in dry weather, and then sweeping it thinly and regularly with a broom.

Horticulture.—R. C. Winthrop, speaking of the achievements of this "fine art of common life," says, "It decorates the dwelling of the humblest laborer with undoubted originals, by the oldest masters, and places within his daily view fruit pieces such as Van Huysen never painted, and landscapes such as Poussin could only copy."

A Profitable Orchard.—The *American Agriculturist* says, "A gentleman within our knowledge has a small orchard on the Hudson river, of less than 7 acres which produces from $500 to $750 worth of apples annually. This is not 1 year of plenty, and another or two of famine, but is a regular, steady, average yield. All this is secured by the simplest process, viz. good management."

Another Orchard made profitable.—An old orchard of four acres had not been plowed for nearly 30 years, and was regarded by the neighbors as worthless. It did not yield more than eight barrels a year. It was well plowed, and thoroughly manured for three successive years, and cultivated with crops. It then produced *two hundred and eighty barrels of apples.*

Curculio.

L. A. Spalding of Lockport, has addressed a letter to our old correspondent, David Thomas, relative to the curculio, from which we take the following paragraphs. It has been long known that this troublesome insect avoided pavements, (*Gen. Farmer*, vol. ii. p. 227,) neither would it venture on a tree that leaned over the water (*Gen. Far.*, vol. ii. p. 219;) but we are satisfied that the extracts will prove interesting to pomologists. Whether this method is cheaper than jarring the trees, and catching the curculio on sheets, may admit of a doubt, for boys soon become very expert at this business.

The idea has occurred to us whether platforms made of light boards to fit closely round each tree, would answer the same purpose. These might be laid down when the trees where in blossom, and removed after the lapse of a month or six weeks. Who will try the experiment?

"I promised to give thee the result of my experiment of paving under *apricot* and *plum trees*, to prevent the attacks of the curculio. For seven years previously I could raise none of the former, and but very few of the latter; but the trees which I protected in this manner, have borne abundantly every year, while those in the same row which are not flagged have borne nothing.

"My trees are ten feet apart in the row, and the rows twenty-four feet apart, running east and west. After manuring a strip under the trees ten feet in width, I covered it with leached ashes two inches thick, and in the ashes I laid flat stones—though brick would do as well—and to prevent the grass and weeds growing, I sowed fine salt over the stones two or three times a year, sufficient to kill the grass; and if by the action of the weather, the joints between the stones became open, I filled them with ashes. I wash my trees once or twice a year with tobacco juice and soft soap, adding a small quantity of salt.

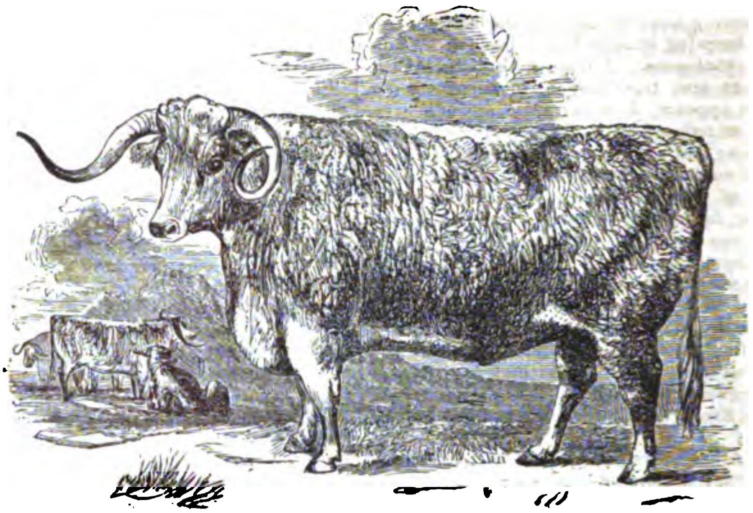
"This year the trees are loaded as usual. Some of the apricots are marked by the curculio, but hardly enough to thin out the fruit as it should be. Such as drop off, are swept up, and given to the hogs. Should any be left, the worm could only find shelter among salt and ashes.

"This plan is cheaper than *jarring the trees*, and much more effectual, unless more perseveringly pursued than I could do."

A Curculio Catcher.

Eds. Cultivator—I send you a description of a curculio catcher different from what I have seen figured or described in any article on the subject, and which I think is a decided improvement on anything used for the purpose. It consists of a square of sheeting or cheap cotton cloth; the size to correspond with the tops of the trees which it is to be used under; one side of the cloth is to be nailed to a straight pole with carpet tacks; the opposite side is also to be nailed to a pole with a division or joint in the middle, and an opening in the cloth to the centre, which is to be occupied by the trunk of the tree. The ends of the poles at the joint are to be fitted with a ferule or socket, into which each end is to be inserted; one end to be fastened permanently, the other so that it can be taken out when the sheet is to be placed around the tree and then put together again, which brings the opening in the sheet together, leaving no space for the insects to drop through. It will be seen that this article is convenient to be handled by two persons, a third person is required to jar the trees. Those who are willing to devote a few hours to this kind of work, may be sure of saving their crop of plums, apricots and cherries, which are often lost from inattention or lack of facilities for catching the *critters* which cause the fruit to fall prematurely from the trees. The stick which is used to jar the trees with should be covered over the end with several thicknesses of cloth, to prevent the branches from being bruised. I. Hildreth. *Big Stream Point, June* 12, 1849.

☞ We learn that a strange and fatal disease has appeared among horses in North Adams, Mass. Several have died. The symptoms are cramp, swelling, and difficulty of swallowing and breathing.



66—LONG-HORNED OX.

Varieties of the Domestic Ox.

The Long-Horns.

The Long-Horns may be fairly considered as one of the original stocks of Britain and Ireland. More than two thousand years ago, when these countries were invaded by the Romans, the Long-Horns were found occupying the low and marshy sections of those islands, while the various middle-horned varieties were in possession of the hills and mountains.

The Long-Horns were much larger than the other aboriginal breeds of Britain* but were generally of coarse bone, thick and mellow hide, with drooping horns of great length,—those of the oxen being from two and a-half to three and a-half feet. The cows were noted for the extreme richness of their milk, which was yielded in moderate quantity. Though the general character of the breed was coarse, the animals had points and qualities which recommended them to favor: they were hardy, excellent for the dairy, and though arriving late to maturity, were very long-lived.

The district of Craven in Yorkshire and Lancashire, were the original strongholds of the long-horns in England. The great improver of the breed was Bakewell, who founded what was called the Dishley or new Leicester breed of long-horns, which was for many years the most popular breed in the world. Before Bakewell's day, some spirited attempts at improvement had been made with the breed. Sir Thomas Greslry had long-horned stock which was highly prized; and about the year 1720 a blacksmith and small farmer by the name of Welby procured some cows of this herd, which were taken to Linton in Derbyshire. Soon after this, Mr. Webster, of Canley, procured some of the stock of Sir Thomas Gresley, and procured bulls from Lancashire and Westmoreland, and after several years, distinguished himself as a breeder. He established what was called the Canley breed, from which Mr. Bakewell, about 1760, purchased two long-horned heifers, and by crossing these with two long-horned bulls obtained from Westmoreland, he laid the foundation of his famous breed.

Mr. Bakewell's object was the production of beef at the least expense. Youatt observes—" Many years did not pass before his stock was unrivalled for the roundness of its form and smallness of its bone, and its aptitude to acquire external fat; while they were small consumers of food in proportion to their size; but at the same time, their qualities as milkers were very considerably lessened. The *grazier* could not too highly value the Dishley or new Leicester long-horn, but the *dairymen* and the *little farmer* clung to the old breed as most useful for their purpose."

Mr. Bakewell was ultimately most successful in the accomplishment of his object. He established a breed which for fattening purposes, were superior to any before known; and it is, indeed, doubtful whether, for this purpose they have ever been surpassed. This breed was bred many years by Mr. Bakewell and his associates and successors, and was of great service in crossing the common long-horns, not only in England, but in Ireland. Youatt says—" The Irish breeders owe everything to the new Leicester cattle. A new stock, in fact, has arisen since the improved long-horns were grafted on the native Irish stock."

The stock of Bakewell, and his successors, Fowler, Princep, Munday, and Honeybourne, frequently sold at very high prices. In 1791, bulls sold at auction at £230 to £250, and cows at £150 to £273; and Mr. Fowler refused 500 guineas for ten bull calves.

The long-horns are not as frequently to be met with pure, as formerly: and the variety introduced and cultivated by Bakewell, is thought to be nearly extinct. The pure long-horned stock is, however, still cherished and preserved by some breeders with great care, and excellent animals of this breed are brought out at the English shows.

Importations of long-horns, of Bakewell's variety, were made to this country by several individuals. They were taken to Kentucky by Mr. Sanders, as mentioned by him in the March number of our current volume; cows of this stock were introduced into Massachusetts by Gilbert Stewart and Ward N. Boylston; two bulls of this or some other family of long-horns were imported into Maine by Mr. Vaughan, in 1792; and the breed was introduced into New-York, by Mr. Adcock of Otsego county. There are probably but few full bloods at the present time in the country. Their success in crossing with the common stock, has been generally satisfactory. They generally improved the form, constitution and muscular energy of our stock, rendering it better for fattening and for labor, while the cows were not inferior for the dairy. The celebrity which the working oxen of some districts of Maine have acquired for their great strength and power, had its foundation in the progeny of the long-horn bulls introduced by Mr. Vaughan. In Kentucky and other western states, it is admitted, that a dash of the long-horn blood is highly useful in giving to the cattle the essential faculty of traveling well. Mr. Sanders, in the article before refer.ed to, mentions the value of the breed in imparting vigor and constitution to the short-horns.

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* The short-horns are not considered aboriginal having been introduced into England from the Continent.

The Poultry Yard.

The Pea Fowl.

This bird, the splendor of whose plumage has been celebrated from the earliest times, is a native of India, where it is still found in a wild state. There are two species; the common, and the Japanese. In size they are about equal; but the plumage of the Japanese species differs considerably from the other, the prevailing colors being green and blue, changing into each other according as they are exposed to the rays of light. There are, however, occasional variations of color in the common species, some being pied, and some entirely white. Mr. COLMAN, in his "Familiar Letters," mentions having seen one of the latter color in the aviary of the Duchess of Richmond. A definite idea of the brilliancy of the peacock's plumage, cannot be given by description, but the bird is generally well known. The feathers which give to the peacock its most striking character, are in popular language called the tail; though they are not the tail, but the tail-coverts. The proper tail is under these, and consists of short, stiff, rust colored feathers, which support the long "gem-starred plumes." The true tail-feathers are eighteen in number; the head is surmounted by a crest of twenty-four upright feathers. The female has the crest but not the other ornamental plumes of the male.

67—THE PEA-FOWL.

The pea-fowl is usually kept merely as an ornament, though its flesh is, in young birds, considered fully equal to that of the turkey. "In ancient times," says Martin —"no great feast in the baron's hall was served up without this bird to grace it—it was presented by the sewer, well cooked, on a large dish, but re-arrayed in its gorgeous plumage; and before the peacock and the ladies did the adventurous knight make his vow."

The pea-hen sometimes breeds the second season, and when she is only a year old, but not generally till two years old. She usually lays from five to ten eggs in a season, and the period of incubation is thirty days. The female should be concealed from the male while she is sitting, because, from a strange propensity, he will often break the eggs, and will sometimes kill the young when they first come out. Even the chicks of turkeys and common fowls are not always safe if allowed to roam in his accustomed walks. The cock does not acquire his full plumage till he is three years old.

The Farmer's Note-Book.

Highways.

The greatest improvement on roads introduced into this quarter, consists in *scraping them lengthwise* as soon as they become settled in spring, or at any other time after wet weather. It is a great labor-saving operation. One day's work with a heavy scraper is generally sufficient to put a whole road district in the finest condition,—filling up the *ruts*, breaking down the *hubs*, and rendering the entire surface as smooth as it ever is in summer.

In years past it was the practice,—and it continues to be so in many districts,—to let the roads alone, for it was found that they would gradually become smooth in dry weather by the battering of hoofs, and the grinding of wheels; and though a long time was required for the purpose, it was supposed to cost nothing; but it did cost the team many a hard strain, and the joints of the wagon or carriage many a hard wrench, before the task was completed. We have now some reason to believe however, that PUBLIC SPIRIT is on the increase among path-masters; and hope that if "two dry sticks will burn a green one," two good examples will not be without their proper influence.

About the middle of the 4th month, I observed that the road from Aurora to Poplar Ridge, had been rendered beautifully smooth; and on my way to Auburn, similar improvements cheered me through most of the distance, though more scantily as I approached that city, ceasing entirely a little before I entered its limits. In this, I was disappointed, for cities ought to be the head-quarters of Public Spirit.

There is another labor-saving operation which some worthy citizen in the olden time had caused to be incorporated with our Road Laws, viz: *To throw the loose stones out of the beaten track once a month.* This excellent provision, however, has long since been a dead letter. To the traveler who goes forth in his own conveyance, such neglect must be comfortless, especially if he has eyes to observe and faculties to think; and this will be increased where soft mud, or rich soil has been scraped in, inevitably to make mortar in a climate like ours. But our whole system of road laws, needs revision; and the office of overseer of highways ought to be utterly abolished. VIATOR.

Besides the defects in the management of roads mentioned by our esteemed correspondent, there are some others which we think ought to be remedied. In a late excursion, we had occasion to feel the want of *guide-boards*, in many instances. Not unfrequently, where the roads diverged, there was nothing to direct the traveler to his destined point, and he could only learn which way to go, by inquiring at the nearest house, sometimes half a mile out of his direct route. We had supposed there were laws in most parts of our country, requiring the erection and support of suitable guide-boards. If there are not such laws, they are certainly *needed* in some communities; and if such laws exist, they should be enforced. Another great defect is, leaving roads rough and uneven, after they have been, as is in some cases falsely called, *repaired*. Loads of earth unspread, and large lumps of hard clay, are left on the traveled part of the road, where there is no way of avoiding them, rendering carriages liable to be broken, with all the care that can be used in driving. The hollows hold water, which softens the earth and the wheels work out the mud, leaving deep holes. Why not finish the road as far as begun,—or rather begin no more than can be finished,—leaving the rest without making it worse than it was before? Another defect,—which, however, we noticed in but few instances,—was plowing the sides and ridging the centre of roads on the tops *of hills and sharp knolls*. How much easier to have *improved* the road by scraping the tops of the knolls into the hollows! EDS.

Farm Improvements.

The improvement of the soil is one great object to be attained by the good farmer. All the fertilising substances within his reach will be devoted to this purpose, in order to increase the present quantity of his crops, and to insure a greater fertility of soil for the future. Annually removing the productions of the soil proves exhausting, and in time would render the soil barren, but science teaches us, that all the substances that make a soil fertile, can be restored, and its original richness be retained. It is then the duty of all that cultivate the earth, so to direct their labors that all the fertilising elements which they take from the earth, shall be returned to it again, that the soil be neither "barren nor unfruitful." That there are many who take an opposite course is not to be denied. The precept "keep what you have and get what you can," is as effectually obeyed in directing the labors of their farms, as in their traffic with their fellow men. And yet even such men will acknowledge the importance of improving the soil.

But though the improvement of the soil is reckoned of the first importance, the improvement of the farm in other respects, should certainly not be neglected. The judicious and enterprising farmer will see where improvements *should* be made, and he will see that they *are* made. It is not supposed that farmers as a class, have the means to make radical alterations in their buildings, or in the plan of their farms. They need not. A few hours' labor here, or a few dollars expended there, may make a greater improvement proportionally, than hundreds of dollars laid out in alterations. Look at those bars, which have to be let down or taken away, on an average, once or twice a day throughout the year, for the purpose of passing through. Just put a gate there, which can be done at a trifling expense, and there is an improvement from which benefit will be derived every day. A gate not only facilitates passing in and out, but it looks better. Their superiority needs no demonstration,—it is a "fixed fact." And yet there are thousands of farms scattered all over the land, that are entirely without any such *labor-saving* articles, and farmers are living as contentedly as if they could not be obtained.

Again; how often are we reminded of the observation of Solomon, "I went by the field of the slothful, and lo, it was all grown over with thorns, and nettles covered the face thereof, and the stone wall thereof was broken down," when a few hours' work would destroy the "thorns," eradicate the "nettles," and repair the "stone wall," while the satisfaction of contemplating the improvement, would amply compensate for the labor bestowed. I know the women and children are eloquent pleaders in behalf of the raspberry and blackberry bushes, but they had better be cultivated in the garden, than monopolize the corners and sides of fields appropriated to grass and grain.

Again; another method of improvment is by building substantial fences. These will differ in different localities according to the kind and cheapness of material. In New England, and especially in the Granite State, the majority of farms have the material for stone wall scattered all over their surface. This can be made available by digging and occasionally blasting, and when once laid into wall will last forever. This method, by removing the stones from the field, and by making a durable fence, has a double advantage. In building wall where the ground is soft, and indeed in all cases, it is better to dig a trench, say about eighteen inches wide, down to the subsoil, and fill nearly full with small stones, on which to lay the foundation; then the wall will not be thrown out of place by frost, nor settle into the ground. Stone wall is certainly expensive in comparison with some other fences, but its durability and security renders it cheaper in the end.

These are some of the methods in which farms may be improved. But the farmer, who in his system combines beauty with utility, will need no suggestions in regard to the improvement of his farm. When his crops do not require his attention, he will find something to do, either in beautifying or benefiting his premises. Many acknowledge the necessity of improvements, but they never begin to make them. Bushes grow around their fields and meadows, rocks and stones encumber their tillage lands, their fences grow every year more unsightly, and their fruit trees remain unpruned and ungrafted; but they plead they "don't have time to remedy the evils."

> "They know the right and they approve it too,
> They know the wrong, but still the wrong pursue."

W. L. EATON. *East Weare.*

Imported Cattle.

EDS. CULTIVATOR—On my return from England last spring I brought with me, for account of Col. Sherwood, of Auburn, New-York, and myself, a short horn bull and three short horn heifers; and one short horn bull calf for J. F. Sheafe, Esq., of Dutches Co., N. Y.—Col. Sherwood and myself have had so many inquiries as to these cattle, that I ask a notice of them through your columns.

The bull is 3d DUKE of CAMBRIDGE; his portrait and pedigree may be seen in the 4th vol. of the English Herd Book, page ——, No. (5941). He was bred by that distinguished breeder, Thomas Bates, Esq., of Kirkleavington, Yarm, England, who is so widely and well known both in England and America.

The heifers and bull calf were bred by John Stephenson, Esq., of the county of Durham, England, well known as the possessor of the superior and famous PRINCESS TRIBE of short horns.

In the execution of the commissions of Mr. Sheafe and Col. Sherwood, I was left to my own discretion; they trusting to my judgment. I made a thorough examination of the various herds of short horns in England, and from among them selected such animals as I thought would meet the views of my associates, and at the same time satisfy the critical scrutiny of American breeders.

These cattle have now been in America five months, and have been seen by hundreds of persons, including many of our best judges and breeders. It gives me great pleasure to say they have met the approbation of all who have seen them. The universal testimony is that in every respect they are the best short horns ever imported into America.

The vessel on which they were imported, encountered weather of extraordinary severity, and the voyage was both long and tempestuous; indeed for twenty days there was a continued hurricane. In consequence of this, the cattle were reduced and worn out. They are now all recovering, except one heifer; she was ill and was knocked all to pieces, and has not yet regained her form, and I fear may not. She was the best of the three heifers before sailing.

The origin of these animals is this. The late Sir Henry Vane Tempest, of Wynyard Park, county of Durham, England, possessed a herd of short horns widely known for its wonderful and unsurpassed excellence. They are designated in England the "WYNYARD HERD" or PRINCESS TRIBE. In 1800 Sir Henry purchased the original of his herd, the cow Princess, of Robert Colling. After the death of Sir Henry, the Wynyard herd was sold, and the cow Angelina (a grandaughter of Princess) became the property of Mr. Stephenson, of Wolviston, county of Durham. From Angelina the animals which I brought over are descended. I give the pedigree of one of the heifers in full, to show how rich is their breeding.

Princess 3d, got by Napier, (No. 6238 in the English Herd Book) dam Rose Ann, by Bellerophon, (No. 3119) grandam Rosette by Belvidere, (1706); great grandam Red Rose, by Waterloo, (2816); great great grandam Moss Rose by Baron, (58); gr. gr. gr. grandam Angelina (bred by Sir Henry Vane Tempest) by Phenomenon, (291); gr. gr. gr. gr. grandam Anna Boleyn, by Favorite (252); gr. gr. gr. gr. gr. grandam Princess, (bred by Robert Colling) by Favorite, (252); gr. gr. gr. gr. gr. gr. grandam Brighteyes by Favorite, (252); gr. gr. gr. gr. gr. gr. gr. grandam Brighteyes, (bred by Alexander Hall, and by him sold to Robert Colling) by Hubback, (319); gr. gr. gr. gr. gr. gr. gr. gr. grandam Brighteyes by Snowdon's bull, (612); gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam by Masterman's bull, (422); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam by Harrison's bull, (669); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam Tripes, (bred by Mr. Pickering of Sedgefield and by him sold to Mr. Hall) by the Studley bull, (627).

The pedigree of the Princess Tribe of short horns traces farther back than any one recorded in the Herd Book, and the *blood throughout* is of the *highest* character.

In the above pedigree the bulls Napier, Bellerophon, Belvidere and Waterloo, were all bred by Mr. Stephenson, and are all descended from Angelina. Baron is also of the same tribe, though not bred by Mr. Stephenson.

The bull 3d Duke of Cambridge was got by Duke of Northumberland (1940), dam Waterloo 2d; by Belvidere, grandam Waterloo 1st by Waterloo (2816), great grandam Lady Antrim, by Waterloo—Anna, by Launsleeves, (365)—Angelina by Phenomenon, (491), &c.

Duke of Northumberland, bred by Mr. Bates, was got by Belvidere, (1706); dam Duchess 34th, by Belvidere, (1706); grandam Duchess 29th, by second Hubback, (1423).

Mr. Bates bought Belvidere of Mr. Stephenson.

The other two heifers are bred as follows:

Princess 2d got by General Sale, (8099); dam Duchess by 4th Duke of Northumberland, (—); grandam Rosette by Belvidere, (1706), &c., as in pedigree of Princess 3d. Fourth Duke of Northumberland was brother of Duke of Northumberland.

Red Rose 3d; got by General Sale, (8099); Jane, Maid of Orleans by Marmaluke, (2258); grandam Helena by Waterloo, (2816); great grandam Moss Rose by Baron, (58), &c., as in pedigree of Princess 3d.

General Sale was got by Napier, and is a full brother of Princess 3d.

There are portraits of Napier and Princess 2d, at the rooms of the N. Y. State Agricultural Society, Albany. *Such* portraits of *such* animals are no where else to be seen in this country. I invite an inspection of them.

I have great pleasure in knowing that I have brought to this country so superior a bull from the herd of that eminent breeder, Mr. Bates. He is the only bull in America got by Mr. Bates' *crack prize* bull Duke of Northumberland, the best Mr. Bates ever bred; and Mr. Bates has but one more got by the same bull, now left; and Duke of Northumberland is dead. Persons desiring the blood of Mr. Bates' herd, can no where else in this country procure it *with such high characteristics of style, quality, symmetry* and *substance*. Mr. Bates repeatedly told me that 3d. Duke of Cambridge was more like his sire than any other bull ever got by him.

From the various expressions of approval received, I select the following. The writer, Lewis F. Allen, is well known as an extensive breeder of short horns, and as a judge. No person in the United States has had a more intimate knowledge of the short horns in our country for the last twenty-five years; he is the author of the American Herd Book. * * * "Since I saw him I have thought much on your bull 3d. Duke of Cambridge, and in comparing him in my mind with *all* the bulls I have ever seen, I am more and more impressed with his superior value to anything *yet* brought into the United States. In short he fills my mind *entirely* with *all* the qualities which a *perfect* short horn should possess; and I don't know but the heifers are *quite* his equals in style, quality, &c. I trust you will have all the success, both in increase and in the sale of their produce which you deserve; for our country has *never* before, within my knowledge, received such an acquisition in the stock line as in these cattle. You deserve much for your enterprise, and Mr. Stevens a great deal for his judgment and good taste in selecting such animals. They far exceed my anticipations, although, I am free to say, I anticipated much from Stevens's selections, with all England for a field to choose in."

This opinion was unsolicited on the part of Col. Sherwood or myself, and wholly voluntary on the part of Mr. Allen.

Steps have been taken to have a portrait of 3d. Duke of Cambridge engraved for publication in *The Cultivator* for September or October; and of Princess 2d. in some future number.

These animals are now at Col. Sherwood's, Auburn, New-York, where they may be seen. It is now designed to show them at Syracuse, at the great cattle show of the State Society in September. Col. Sherwood and myself invite the attention of breeders and amateurs to them. AMBROSE STEVENS. *New-York.*

Litigation.

EDS. CULTIVATOR—Whoever shall write a fair history of our State, must set it down as one of the evils of the time, that we are a litigious people, too fond of law suits; and that we support and sustain too many lawyers.

The farmers being a majority; and their property being mainly in lands that can be readily reached by the taxing officers, pay a larger share of the expenses of government in proportion to their means, than those engaged in other pursuits. If they are in debt for their lands, still they are taxed for them, without any allowance for their indebtedness. This might and ought to be remedied by an amendment of the assessment and taxing laws. Still, this would not reach the evil of a too expensive judiciary system. This must be done, if at all, by lessening the amount of litigation. Let the cause be removed, and the effect will cease, as a matter of course. It seems to me that public opinion needs a change on this subject; and if effected, it must commence by individual exertion. Let each farmer use his influence to effect a reform, and they will succeed. In many of the causes tried at our county courts, the costs exceed the damages; and the parties are the worse off, both in a moral and pecuniary point of view. Jurors and witnesses are called from their business, and the people taxed to pay judges, jurors, &c. Suits are frequently determined by some technicality of the law, and not by strict justice. The parties often resort to intrigue and management to gain their suit, which they would not otherwise do. But few men if any, who are frequently engaged in lawsuits, sustain a good moral character. A civil suit, commenced in the first instance, in a justices' court, for a trifling amount, often gets a whole neighborhood by the ears; and is the cause of divors slander suits, indictments for assault and battery, perjury, &c. Thus they are harrassed by being called to the county seats as witnesses; many of them take sides with one or the other of the parties. Bitter and unkind feelings are engendered, and a looseness of moral principle, prejudicial to good morals, and good society is the natural consequence.

If, in traveling, you pass a huddle of houses in a dilapidated condition, and where almost everything in the vicinity bears marks of sloth and negligence, you may set it down as morally certain, that justices' courts are frequent, and the people are given to litigation; and that the only persons, if any, who make money, are the rumseller, the pettifogger, justice and constable.

How then are these evils, (and all must admit them as such,) to be remedied? Let every farmer make up his mind not to have a lawsuit, *unless it is absolutely necessary*. Let him as a general thing, sell his produce for ready pay; pay down for what he buys, deal honorably and uprightly, adopt the rule of "doing as he would wish to be done by," and he will seldom be in a situation in which a suit will be necessary. We can find many farmers, sixty or seventy years of age, who never had a suit in their lives, and the writer of this is one of the number.

Let the most influential farmers take this course, and advise all others to do the same. Let all those who are fond of lawsuits and quarrels, know that they lose character and standing by them; and it is believed that agricultural districts would be much improved, both in a moral, pecuniary and social point of view. The farmers are from their peaceful and retired situation; from their independence and occupation, exactly in a right situation to commence and carry out a reform of this nature, and would themselves be the greatest gainers by it.

When I see a young farmer fond of attending lawsuits; often taking sides with one or the other of the parties, frequently a witness; studying the nice technicalities of the law, and trying to get elected a justice or constable, I cannot but think he had better be learning and practicing the art of good farming; and spending his leisure time, reading some good works on agriculture, moral philosophy, and political economy. FARMER.

Yield of Crops in Ohio.

We have compiled the following table from the returns of the several counties in the state of Ohio, published in the Report of the State Board of Agriculture. They purport to give the average yield per acre, for 1848. Wheat is generally stated to have been considerably above an average—other crops about an average, compared with other seasons. Potatoes are said to have been injured by the "disease" in most instances, and in several counties, where the yield is not given it is mentioned as a failure—not more than five to twenty bushels of sound tubers per acre having been obtained. Some other crops are noticed in the returns—such as buckwheat, and, in a few instances, tobacco. The yield of the former ranges from twelve to thirty-seven bushels per acre; and that of the latter from 600 to 2000 pounds per acre.

COUNTIES.	HAY. Tons.	POTATOES. Bushels.	WHEAT. Bushels.	RYE. Bush	BARLEY. Bushels.	OATS. Bushels.	IND CORN. Bushels.
Adams,			12	....	....	106	30
Athens,	1½	100	15	....	....	25	40
Ashtal ula,	1½	150	15	....	....	40	45
Ashland,	1½	40	10	15	15	30	50
Champaigne,		75	16	....	....	30	46
Carroll,	2½	50	15	20	35	28	45
Clinton,	1½	40	20	....	....	25	45
Columbiana,	2	....	17	....	35	50	35
Clark,	1½	100	18	15	....	40	40
Cuyahoga,	1½	....	10	12	....	40	35
Crawford,	2	....	20	....	35	33	40
Clermont,	1	50	13	10	12	12	45
Coshocton,	....	....	12	....	....	25	40
Erie,	2	25	15	....	32	25	35
Franklin,	2	75	18	25	20	40	50
Delaware,	2	....	18	....	20	30	45
Darke,	2	70	20	25	20	35	50
Defiance,	2	150	20	25	20	45	45
Fayette,	1½	30	12	12	....	25	38
Greene,	1½	100	17	20	40†	30	50
Gall a,	1½	50	12	....	....	20	35
Granger,	1½	....	10	10	12	40	35
Guernsey,	1½	80	14	....	25	40	40
Highland,	....	....	12	12	12	15	50
Henry,	1½	50	18	....	....	45	45
Hocking,	2	100	12	....	....	25	35
Hardin,	2	....	17½	14	30	32	35
Hamilton, (averages not given)							
Hancock,	2	50	20	25	....	40	40
Huron, (averages not given.)							
Harrison,	1½	....	15	....	....	26	40
Jefferson,	1½	....	15	15	40	25	40
Lake,	2	50	12	15	25	50	45
Licking,	2	100	18	15	25	30	30
Lawrence,	1	60	10	....	....	20	30
Lorain,	1½	50	13	....	....	40	30
Mahoning,	1½	40	6	....	30	40	40
Medina,	1½	....	10	....	30	40	35
Monroe,	1½	....	12	....	....	25	35
Meigs,	1½	60	15	15	20	35	40
Muskingum,	....	....	16½	....	....	40	45
Miami,	1½	....	25	....	....	35	65
Montgomery,	1½	100	18	15	25	30	45
Morgan,	1½	....	20	....	....	30	25
Mercer,	2	100	15	10	18	20	25
Madison,	1½	50	15	20	20	30	40
Ottawa,	1½	....	17	....	..	30	35
Paulding,	2	100	20	....	....	40	50
Putnam,	3	150	18	25	....	25	50
Preble,*	1	60	16	....	....	15	20
Portage,	1½	50	9	8	20	35	40
Perry,	1	....	20	18	....	50	40
Pickaway,	1½	....	15	14	....	30	46
Richland,	2	....	15	15	....	40	35
Ross,	1½	....	13	....	....	22	45
Seneca,	1	....	15	....	15	40	40
Summit,	1½	....	9	12	15	35	40
Shelby,	2	....	22	15	40	40	25
Stark,	2	50	15	20	30	....	30
Trumbull,	1½	60	10	17	20	30	40
Tuscarawas,	2	80	17	16	23	30	40
Union.	1½	80	15	....	....	35	35
Van Wert,	1½	150	20	20	....	30	32
Washington,	1½	100	10	15	....	25	45
Warren,	1½	100	16	12	[illegible]	25	50
Wayne,	2	....	18	20	....	45	35
Wood.	1½	20	10	18	18	34	34
Wyandot.	2	30	15	....	....	35	42

* In this instance the yield is put down at 40 bushels per acre for "fall barley," and 20 for "spring barley."

† All the crops in this county, except wheat, greatly injured by drouth.

Agricultural Reading.

Agricultural pursuits, I deem second in importance to none other. It has ever been my delight to see a spirit of improvement enlisting the minds of many of our most successful farmers, and by observing some of their most skillful management, it has been a source of pleasure to glean ideas and profit by them, whenever the opportunity offered. I shall ever feel that I owe a debt of gratitude to the founder of the first agricultural paper that I became familiarly acquainted with—*The Cultivator*. It enlisted a spirit of observation and improvement—a spirit of *go-aheadativeness*,—to advance eyond where our fore-fathers stopped. *The Cultivator* t its commencement, had a high and aspiring motto— "To Improve the Soil and the Mind"—and I believe has faithfully adhered to this principle up to the present time.

The agricultural community generally, is not divided in respect to their employment) into sects and parties; ut is engaged in common, in raising the products of e soil. I hope to see such a spirit of liberality that ach one will feel free to exert their energies to ameliorate and improve the condition of mankind generally. t the present day, the odium is somewhat dispelled at used to deter many from engaging in agriculture; engages the attention of some of the first men of the ge; and is acknowledged to be not only an honorable, ut a profitable occupation. **Rusticus.** *Quaker Springs, Y., June* 12, 1849.

Agriculture of California.

Eds. Cultivator—The following extracts are from letter received by me from my brother-in-law, Joseph ram, who removed to California with his family, in 846. The portion of the letter which relates to the gricultural resources of that country, I thought might t be uninteresting to many of the readers of *The Cultivator*. The letter is dated Pueblo de San Jose, Uper California, *March* 9, 1849. Daniel H. Wright. *astile, Wyoming county, N. Y.*

"Can crops be raised in California without irrigaon ?"

Wheat, barley, corn, and oats need no irrigation, they well on the prairies; but vegetables need water, ough on low damp ground, they do well.

"What do grains yield per acre ?"

Wheat from 25 to 75 bushels per acre; barley the me, corn from 15 to 20 bushels; oats grow spontaously over a great portion of the country;—I have equently seen those that would yield from 60 to 70 shels per acre. All kinds of grain are scarce and ar.

Plowing for wheat commences in December, and we w from that time till the first of March. Farming has en neglected on account of the mines. Wheat is orth $2 a bushel, corn $3.50, barley $5.00, potatoes .50, butter per pound, $1, eggs per dozen $1, horses ch, $50 to $200, mules $100 to $300. American ox-, a yoke, $200, California oxen, $100, beef cattle, ch, $8 to $12, wagons $200 to $1000. The scarcity akes the price. There is nothing cheap but beef cat-.

Lumber is worth $75 per thousand feet, very scarce that; it has sold for more. Nails 10 cents per lb., the keg.

Monterey has about 5,000 inhabitants, Puebla, 2,0, San Francisco, 5,000.

Forty-six vessels came into the port of Monterey, and ghty-four into San Francisco, during the past year, but whalers,—they are afraid to come in, for their hands ould run away to the mines. The extent of the bay Monterey is considerable—it is 15 miles across its outh;—the harbor is a narrow neck running into the in land; it is properly an arm of the sea. San Franco has taken the lead the past year, being better siated for the mines.

The Spaniards depend on selling horses and cattle for eir subsistence. The Americans get their living by *inning* the Spaniards, and many have grown rich at at. The latter are very indolent, and much given to mbling.

We have a variety of fruit,—pears, the best that I er saw; apples rather poor quality—need grafting; aches, very good; quinces, most excellent; grapes good; apricots, nectarines and figs, but not good.

The changes of the seasons are as follows: The rains commence about the first of December, and we have occasional showers from that time until the month of March; the balance of the year has no rain. But vegetation does not suffer as much as you might imagine; the soil seems adapted to the climate.

The Spaniards build altogether with *dobies* or unburnt bricks; most of the Americans build frame houses. But those dobies make a most excellent house.

Grain is always threshed immediately after it is cut —trod out by horses.

There is some very good water, and considerable very bad—the springs are good, but many of the wells are poor.

Bilious diseases are the most common.

The face of the country is mountainous with valleys between. For agricultural purposes, the valleys are generally good, the hills and mountains are only valuable for grazing.

The people transport their produce in carts drawn by oxen, from the interior to the towns on the coast.

"What is land worth?"

The price of land is rising fast. I have a piece of land containing between three and four hundred acres, for which I paid, two years since, $200, now it would bring $4,000. Lots in Monterey are worth from $100 to $2,000, without buildings.

Wagon timber is scarce near the coast, but in the vicinity of the mines, there is an abundance.

We have plenty of saw mills, but they are standing idle, those that tended them having gone to the mines.

The forest trees are, oak, pine, red-wood, madrone, cedar, live-oak, white and red fir. The timber is confined to the hills;—the plains are generally open. I have seen abundance of red-wood timber three hundred feet high, and from 12 to 15 feet in diameter at the base.

The streams overflow in June and July, when the snow melts on the high mountains. The rains during winter raise the streams, but not to overflow.

It is about 200 miles from the coast to where the gold is found; the gold mines run north and south, parallel with the coast.

We have plenty of fish, but few fishermen. Also, deer, elk, antelope, grizly bear, and wild horses and cattle. But no one stops to hunt now—except the Spaniards, who go out now and then to catch wild horses, which are becoming so valuable that it is quite an object to catch them. Cattle and hogs are as fine here as I ever saw. Our Spanish cows cannot be beat by your Durhams, only they will kick.

This would be a fine country for bees, if they could be got here; but it is somewhat singular, there are none to be found.

Weather in Virginia.

Eds. Cultivator.—I see in the Cultivator for June, 1849, page 178, a piece headed the weather, and as I keep a sort of diary, I concluded to send you an account of the weather with dates. I live thirty miles west of Norfolk. Nov. 3, '48, frost and ice; 5, rain; 6, fair and cold; 8, frost, cold and fair; 9, ice; 12, rain; 16, fair and pleasant; 18, rain and very chilly; 19, snowed; 20, ice; 21, ice; 25, warm; 20, frost and ice. Dec. 2, rain; 12 to 16, rain; 19, very warm; 28 to 31, ice. Jan. 1, cold; 3, freezing of nights to 7; 9, snowed; 11, very cold; 21, rain; 24, cold and fair. Feby. 1, rain; 6, fair and very cold; 8, freezing; 13, fair and cold; 15, snowed six inches deep; 18, snowed; 22, snowed; 24, fair and pleasant; 26, storm, wind and rain; 28, storm continues. March 1, rain and very chilly; 11, delightful; 20, cloudy; 31, fair and pleasant. April 1, cloudy and chilly; 5, clouds and sun; 10, fair and warm; 12, fair and windy; 14, fair, cold and blustery; 15, ice ½ inch thick and very cold; 16, ice; 17, fair and cold—

and this cold spell killed all the young vegetables in the gardens, (pease cut down, &c.,) and all stone fruits of every sort—19, fair and extremely cold; 20, fair, and not so cold—to the end of the month much more moderate. May came in quite pleasant, &c. &c. J. Bunch. *Chuckatuck, June*, 20, 1849.

The Cost of Fine Wool.

Eds. Cultivator.—It is impossible to give your correspondents, who inquire the cost of a pound of fine wool, a definite answer. The best answer may be found in a statement of facts and estimates by those, in different parts of the land, who have experience in the wool business. Like Polydamas, I was pleased with the exact statistics and sensible estimates of Mr. Pettibone. To the same end I send you a few statements, in regard to the business here. And what I say shall answer for about half a dozen farms in this immediate neighborhood, which is in a valley called the Oblong, quite in the eastern part of Dutchess county. We follow a mixed husbandry, as the soil is about equally adapted to grain and grass, and yields a better return than by any single branch of farming. The value of improved lands, in good sized farms, is about fifty dollars per acre. The number of sheep kept on a farm of two hundred acres is four hundred, besides a team of four oxen, two or three horses, four cows, and a few young cattle. There are usually about forty acres under the plow, and one hundred and sixty in meadow and pasture. What proportion of the farm is devoted to the sheep cannot be defined, probably not less than 120 acres. The quantity of wool produced on an average of these flocks is two pounds and three-quarters per fleece; and the average price per pound, for the last six years, has been forty-seven cents. The surplus sheep sold each year from a flock of 400 are not less than 100, at the price of a dollar and a quarter per head. This amounts to six hundred and forty-two dollars.

The cost of keeping sheep includes a part of the general expenses of the farm, besides the interest on the price of the land, as fencing, taxes, seed, plaster, manure, &c. Henry Swift, of Poughkeepsie, was accustomed to pay to a tenant on one of these farms, some years ago, two hundred dollars a year, for the labor given to four hundred sheep, which included the securing of the hay, winter care, washing and shearing, and all other labor devoted to them.

Now, as to the profits of the business of growing fine wool, it is plain that it does not yield a large per cent, though like other branches of farming, when *well done*, it brings a fair return. We quite agree with Mr. Pettibone, that it makes all the difference in the world, whether a thing is done right. There is a general impression among our farmers, that their business does not yield them five per cent. on the capital invested; but I believe it can be demonstrated, that with skilful and prudent management, the farm yields at least six per cent., if the valuation of the land be not too extravagant.

On good land, easily cultivated, the raising of grain is twice as profitable as any branch of grazing. But as there must be manure, to keep up the fertility of the soil, it is necessary that a portion of the farm be devoted to stock. Therefore what seems to be a deficiency in the profits of the grass crop, is made up in the increased production of grain, and thus in a mixed husbandry, the acre of grass is truly as profitable as an acre of wheat.

We prefer fine wooled sheep to other stock, for several reasons; and the first is that on our dry arable lands it is more profitable than making beef, and brings much less care and labor than the dairy. We estimate that it requires as much hay and pasture for eight cows or steers, as for one hundred sheep. Sheep will do as well on straw and other coarse feed, as any stock will, and on poor or dry pasture sheep will do well, while cows or fatting cattle would not do at all. The quantity of hay to one hundred sheep through the winter does not exceed fifteen tons. It is our opinion also that on land suitable for wheat and corn, the manure of sheep is better than the manure of cattle, and on certain cold grass lands as a top dressing. I might add that there is less fluctuation in the wool market, than in that of beef and the products of the dairy, constituting a more stable and uniform business. And there is less trouble of buying and selling, after the flock is once established.

Some good farmers enjoy a greater profit than that I have stated, but many, for want of proper care, miss not only the profits, but also all the pleasures of their profession. I ought to add, that in some of the middle towns of Dutchess, on their fine grazing lands, they have given up fine wooled sheep for cattle; but we still think that this business, in connection with the whole system of farming, should not be hastily exchanged for any other. Newton Reed. *Amenia Union, July*, 1849.

Wire Fences.

Eds. Cultivator—A writer who signs himself S. W., in your July number, desires information on the subject of making wire fences. I will give what information I am able, and from my own experience. I have made, during the spring of 1848, about 1000 feet of wire fence on my premises; about 700 feet of which I put up in the following manner:

The posts were of white oak and butternut, and as it was undertaken mainly as an experiment, and as I intended eventually to plant some kind of hedge on the line, I paid but little regard either to size or beauty of the posts. They were set ten feet apart, and in depth about two feet, excepting at each end, one of larger size was set about four feet deep, imbeded firmly in stones, with a brace to each post, running from the top to near the bottom of the next. Four holes in each post were bored with a brace and bit from eight to nine inches apart. Wire of No. 9, was run through the whole length, and fastened at one end; and I adopted the following simple and easy method of straining them at the other end. I took a wrench which I use for turning the nuts on may wagon axles, and fitted *it* on one end of a stick of hard wood one or two feet long—the remainder of the stick being nearly round, and one or one and a half inch in diameter. Through that end of the stick, a hole was bored to admit the wire after it had passed through the end post. I then turned the stick with the wrench, until the wire obtained a sufficient tension—and, by the way, a great power can be obtained by such a purchase. The stick was then nailed to the post, and sawed off, and the same process performed with the remaining wires until all of the stick which was necessary was used up.

Another fence near my house was built with rather more regard to fancy. The posts were small, of uniform size and set nearer together, and the wires run through, forming lattice or diamond work, by passing alternately from the first to the second hole, and so on down. In this fence seven wires of smaller size, (No. 11) were used, with the addition of a board at the base. Upon all of the wire I put a thick composition of tar, oil and lead, which has proved an effectual protection from rust.

I can now say that these fences have proved good beyond my expectations. I can say to your inquiring correspondent, that I did not loosen the wires, and the posts were not affected in the least by the severe frost of last winter. The cost of the wire for the fence first mentioned, was less than thirty cents per rod. and as to the value of the posts, the account can easily be adjuswith the *wood pile*. Should S. W. obtain no other ply to his questions, I would also state that in my inion, posts at the distance of twenty feet apart would ike a sufficient fence for sheep, provided a wire of all size were placed midway between the posts, and isted around each horizontal one from top to bottom. is would answer nearly as well as an additional post. is desirable to coat the wire with the composition I ve mentioned or with coal tar, as it is liable to rust, rticularly if it passes throught chesnut posts, as that d of timber, although durable, contains an acid ex- mely corroding. The holes should be half an inch, least, in diameter, so as to admit a small brush. In e a post should decay, the wires can easily be sawed t, and new ones replaced. Staples No. 7 or 9, would bably answer well instead of holes through the posts. e whole fence can be painted any color desired.— here trees have been set out on a line, wire can be ached with obvious ease and advantage. In the val- of the Connecticut, where I reside, several of our mers have, within a few months, built wire fences their meadows, which are annually overflowed by the er, and which will doubtless answer every good pur- se intended. The great increase of rail roads, of nufacturing establishments, and the making of bricks, ve materially raised the price of wood and timber in is State; consequently, fencing is quite an item in the pense of a farm. It is my opinion, that in a few ars wire will be a common, if not the chief material fences, at least in this vicinity. R. H. PHELPS. *indsor, Ct., July* 16, 1849.

The $100 Premium on Sheep.

A purse of $100 having been offered for the best 25 erino ewes and the best 25 Merino lambs, under one ar old, to be exhibited at the next fair of the New- ork State Agricultural Society, I propose to be a com- titor in that exhibition, against any and all flocks that ay be brought out. I state this, not as a challenge, t simply as a proposition, which may call together y brother farmers from different parts of the country. y object is to convince myself where the best Merino eep are. If I have not obtained them, I must get em; for I am resolved to improve from the best, hatever may be the cost. By a fair competition we ay compare the best specimens from the best flocks, d by that means may learn where the best sheep are be found. For a series of years, I have spared no ins or expense to possess myself of the best Merino eep that could be found, either in this country or the d world. It remains to be seen whether these efforts ve been successful; and to this end I earnestly invite e growers of Merino wool throughout the Union, to et me on the show-grounds at Syracuse next Sep mber, in honorable competition, and thus add another teresting feature to the somewhat national exhibition ich will be made at the New-York State Fair. A. BINGHAM. *Cornwall, Vt., July* 16, 1849.

What constitutes a Thorough-bred Horse?

In the first place, it may be observed, that there has en a great deal of discussion in various publications, sporting, but to very little purpose, on the much agi- ted question, "What constitutes a full blood, or what termed a thorough-bred horse?" The question is ve- easily decided; the term "thorough-bred horse," erely implying one that can be traced through the ad-Book, by sire and dam, to any Eastern stallion, or what were called the Royal Mares, imported by arles the Second, as they, together with two or three the first imported stallions formed the *ne plus ultra* all racing pedigrees. As to the assertion, that, for horse to claim the title of thorough-bred, it is necessary that he should be of pure Oriental descent, it cannot for a moment be supported; as, independently of the fact that only two mares are stated in the Stud Book, or elsewhere, on authority, to have been imported into England in the early days of racing, it is well known that the first British race-horses were those of British breed, changed, ameliorated, and at last perfected by the admixture of eastern blood, and judicious crossing afterwards. *English Essay.*

Disease among Horses.

A farmer from Tioga county writes that there is a complaint lingering about the horses in some parts of the county, which is called the *Quinzy*, which is very much dreaded. It appeared first in June, 1848. The symptoms are—general stupidity of the animal, and a swelling under the throat at the butt of the jaws. The food comes out of the animal's nose, and occasionally, also, their drink. Several valuable animals have died.

Will the editors inform us as to this disease, and the best remedies for it, and whether it is the same disease so fatal to horses on Long Island, in 1846? J.

We should be pleased to have the suggestions of our veterinarians on this subject. EDS.

Mushrooms.

A great number of *fungi* of a poisonous nature, bear a near resemblance to the mild eatable mushroom, so that even the best judges of them are liable to occasional deception. The following description of of the true mushroom may be useful to those who intend to gather or to purchase this vegetable. The *gills* or under part of the cap are loose, of a *pinkey-red*, changing to a liver-color, situated close to the stem, but not united to it; very thick set, irregularly disposed, some forked next the stem, some next the edge of the cap, and some at both ends, in which case the intermediate smaller gills are generally excluded. The *cap* or pileus is externally white, changing to brown when old, and becoming scurfy; it is regularly convex, fleshy, flatter when old, from two to four inches, but sometimes even nine inches in diameter; it liquifies as it decays; the flesh is white. The *stem* is solid, white, cylindrical, from two to three inches high, half an inch in diameter. The *curtain* or membrane which extends from the stem to the edge of the cap, is white and delicate. When the mushroom first makes its appearance, it is smooth and almost globular, and in this state it is called a button. This species is esteemed the best and most savoury, and is much in request for the table. It is eaten fresh, either stewed or broiled, or preserved as a pickle, or in powder: it also furnishes the sauce called ketchup. The field plants are better for eating than those raised in artificial beds, their flesh being more tender; but the cultivated mushrooms are better looking, may be more easily collected in the proper state for eating, and are firmer and better for pickling. The wild mushrooms are found in parks and other pastures where the turf has not been plowed up for many years. The best time for gathering them is in August and September.

Those who are accustomed to mushrooms can distinguish the true from the false *by the smell*. The following test will be found useful to other persons: Sprinkle salt on the spongy part or gills of the mushrooms to be tried. If they turn yellow, they are poisonous; if they turn black, they are good. Allow the salt to act a little time before you decide as to the color.

Characters of false Mushrooms or Poisonous Fungi. They have a warty cap, or else fragments of membrane adhering to the upper surface; they are heavy, they emerge from a *vulva* or bag; they grow in woods and shady places, or in tufts or clusters on the trunks or stumps of trees; they have an astringent styptic taste and a pungent and often nauseous odor; they become blue after being cut; they are moist on the surface; they possess an orange or rose-red color, they turn yellow when salted. Mushrooms which possess any of these properties, are to be shunned as dangerous.—*Canadian Agriculturist.*

The Wheat Midge.—*Cecidomyia tritici.*

This insect, whose appearance in this country was first noticed about thirty years ago, has been gradually spreading westward. For several years, while it was committing great injury in some of the New England States, and in Lower Canada, it was not seen in the Mohawk valley. The period of its appearance in Western New York is still more recent. No farther west than Syracuse, no particular complaint was heard in regard to it, till 1846, when the wheat crop was reported to have been so much damaged by it, that the culture of that grain was considerably lessened in consequence, the succeeding season. The present season we hear of its ravages in the Genesee valley, and in the state of Ohio. It has doubtless prevailed more or less in those sections for several years, but not in such numbers as to attract notice from the damage it occasioned. In 1843, the writer of this article discovered a few specimens of this insect in the interior of Ohio. The present season the wheat crop in some sections of that state has been seriously affected by it. The *Ohio Cultivator* says—"Some entire fields, which promised well at the time of blossoming, are wholly destroyed by this new devastator." The same insect is said to have attacked the oat crop also, which, in some instances, has been much injured by it.

The great inquiry, of course is, for some defence against so formidable an enemy. Where the insect has formerly prevailed, various means have been used to ward off its attacks. As regards spring wheat, we believe the most successful expedient has been *late sowing*. If sowed the last of May or first of June, the crop would not come into bloom till the insect had gone, or ceased to do damage. An opposite expedient was found best for winter wheat. It was observed that the earliest was least injured by the insect; and this suggested the idea of sowing early varieties, early in the season, where winter wheat was cultivated. Hence the *Mediterranean*, an early variety of winter wheat, was found to escape in a great degree, when later kinds were destroyed. It was beyond the state to be injured by the midge, at the time of its attack.

This kind of wheat was first introduced here on account of its properties in resisting the attacks of the Hessian fly—*Cecidomyia destructor;* but its comparative exemption from injury by this insect, was from a quality quite different from that by which it escaped the midge; it was thought to be owing to the leaf or sheath adhering so closely and firmly to the stalk, that the worms, which are hatched in the furrows of the leaf, were unable to obtain a lodgement within the sheath—the latter being the natural situation for its principal growth and perfection. For several years after the introduction of this variety, it seemed to be almost proof against the Hessian fly; but latterly, as we are told, it appears to have lost, in becoming acclimated, more or less of the peculiar property for which it was at first so highly valued.

The *Black-sea* wheat is a spring variety, which has been cultivated with advantage in sections where the midge has prevailed. The reason of its success is, that it bears late sowing better, with less liability to *rust*, than other varieties.

Thus it is seen that it is on account of *opposite* qualities that certain kinds of winter wheat and spring wheat escape the midge, and that these qualities are still different from the quality which exempts one variety from injury by the Hessian fly.

We would suggest the importance of attention to the proper names of insects. Confounding several species under the same name, is a common error. For instance, the wheat midge is spoken of as "the fly"—a term which, by common consent, has been almost universally given to the Hessian fly—a different species from the midge, and very different in its habits and manner of attacking the wheat crop. In other instances the midge is called "the weevil," "wheat worm," &c.—names which have been given to very different insects. A little study of the important science of entomology, would prevent this confusion, and enable all to converse or correspond understandingly in regard to different insects, and the best modes of preventing their ravages.

There are various parasitical insects which attack and destroy the Hessian fly and the wheat midge. The most important in regard to the former, is a fly call *Ceraphron destructor*. We do not know that this insect has ever been known to attack the wheat midge. A writer in a late number of the *North British Agriculturist*, speaks of a *beetle* which he had found within the glumes of wheat, stinging the larvæ of the midge.—He supposes the beetle to have been the *Ceraphron destructor*, which must be a mistake, as that insect is described by entomologists as a *four-winged fly*.

But the parasites of the wheat midge, are probably but imperfectly known in this country. Dr. Fitch, in his essay, published in the N. Y. State Society's *Transactions* for 1845, observes that four or more species are known abroad, which destroy the worm or larva of the midge.

Dr. F. states that one of the most effective destroyers of this insect, in this country, is the common *yellow bird*. He observes:

"Fields much infested by the insect, have been for many years recognized even by passers on the highway contiguous to them, by the rough and ragged aspect of the heads of the grain. I am not aware that the cause of this peculiar appearance has ever been stated in any of the communications that have appeared in our agricultural papers. It results from the operations of this bird. Alighting, it adroitly grasps the wheat stalk just below the ear, and clinging fearlessly to it, even when swayed to and fro by the wind, it with its bill parts down the chaff from the grain, and one after another of the worms to which it thus gains access are rapidly picked off and devoured. Thus several heads are generally freed from the worms, ere its repast is completed. That it is the worms and not the grain that it is in pursuit of, is readily ascertained by an inspection of the heads after the bird has left them: many of the kernels, not being sufficiently loosened to drop to the ground by the operation, will be found remaining, the maggots that were upon them only having been removed; whilst those kernels of the head which are not infested by the worm, are passed over untouched. It is curious that this little creature, by a tap with its horny bill, or some other process, is enabled to distinguish those scales of chaff which conceal so minute a worm, from those which do not; a knowledge which we only arrive at when we have parted down the chaff. A flock, numbering about fifty, embracing both male and female birds, appeared to make the field which I examined on the 16th of June their constant resort for a period of three weeks or more, where they could be seen busily occupied almost constantly every day. The number of worms consumed by them during this time must have been immense; and I cannot but believe that this lovely bird will henceforward be esteemed for its utility, as much as it has heretofore been for its beauty."

Many artificial modes of destroying this insect have been suggested, and more or less tried, most of which have proved failures. Slaked lime has been recommended to be sown on the heads of the wheat, while it is in blossom; but some careful experiments, instituted at the request of Dr. FITCH, showed that the lime had no effect whatever in preventing the fly from depositing its eggs within the chaff. Dr. F. however, suggests a mode which appears much more feasible. He says:—

"A method is sometimes resorted to abroad, for saving grain fields from the depredations of certain insects of peculiar habits. A rope is drawn along over the grain by two men walking at a brisk pace; which rope thus knocking against the heads of the grain, causes the depredators to drop themselves instantly on the ground, and it is a slow and tedious task for them to get up to the heads of the grain again. A similar process, but with a different apparatus, I contemplate employing against the wheat-midge. This apparatus is a light net made of gauze, three or four feet deep and one or two rods long; its mouth reaching the entire length of the net, and opening to a width of about eighteen inches. A small rope is to be stitched to the upper and another to the lower side of the mouth, reaching slightly beyond the net at each end, which is to be carried by two persons holding the ends of these ropes. If on closely examining the wheat-fields of my vicinity, from the time that the heads begin to protrude from their sheaths, the fly is found to be gathering in swarms in any one of them, I intend repairing to that field in the evening, when the insects will be hovering in such myriads about the heads of the grain, and, with an assistant, carrying the net so that the lower cord will strike a few inches below the heads of grain, the upper one being held nearly a foot in advance of it, and about the same distance above the tops of the heads; by keeping the cords tense and walking at a uniformly rapid pace from side to side of the field, until the whole is swept over, I shall be much disappointed if *countless millions* are not gathered into the net, which is to be instantly closed whenever a pause is made, by bringing the cords together. It is now to be folded or rolled together into a smaller compass, and then pressed by the hands or otherwise so as to crush the vermin contained within it. This measure has been suggested to me, by observing the perfect facility with which the small entomological fly-net becomes *filled* with these flies, on sweeping it to and fro a few times among the heads of infested wheat in the evening. Of course this operation should be resorted to on the first appearance of the fly in numbers, and before its eggs have been deposited so profusely as will occur in the course of a few days. I feel strongly confident, that by sweeping over a field a very few times in the manner above described, the fly may be so completely thinned out and destroyed, as to be incapable of injuring the crop perceptibly."

Cement for Floors

EDS. CULTIVATOR—I have a question to ask about cement for a floor to stand frost. Somewhere in the *The Cultivator*, it is said that sand and coal ashes mixed with coal tar, make a good floor for a yard. Now, the thought came into my head, that hydraulic cement and sand in the same proportions as when used for plastering a cistern, mixed with coal tar, would make a good floor for a piazza. As a certain portion of water is needed to make the cement "set," as it is technically called, the question seems to arise whether it would not be proper to mix the cement first with water, and the sand with coal tar, and immediately afterwards incorporate them in the proper proportions. This would seem to me to be the most proper way, as a certain portion of water is necessary to pass into the solid state with the cement to render it hard; and the coal tar would, I think, secure the whole from the action of the frost. I have no means of trying the experiment, as the coal tar is not to be had in this quarter. What is the price per barrel with you? And how many square feet, in your judgment, will the cement made from a barrel cover with a sufficient thickness to be permanent? C. B. *Princeton, Bureau Co,, Ill., July* 12, 1849.

We learn from Mr. MERRIFIELD, the secretary of the Albany Gas-Light Company, that they have coal tar for sale at $1.25 per bbl. of 30 gallons, *without* the barrel, or $1.75 *with* the barrel. We should be glad to receive an answer to the other inquiries of our correspondent. EDS.

Harvesting Machines.

The *Prairie Farmer* states, that without the use of machinery in gathering the grain in that section, the harvests of the two past years would have gone to some extent ungathered. It adds that the use of those machines will be much increased the present season, and offers the following estimate:—"McCormick's Reaper has been now sold in the West for three seasons extensively, and somewhat before that. The sales amount, say to the following figures: For the year 1847 to 500, the year 1848 to 800 and 1849 to 1,500—equal to 2,800 in all. Other reapers of various patterns have been put in use, say to the number of 100. Of Esterly's Harvester the whole number in use this harvest, may reach 180. Each Reaper will save as claimed, with the horses attached to it, the labor of four and a half men. Each Harvester, it is claimed, with the horses employed, will save the labor of twenty men. Our 2,900 Reapers will then stand in the place of 13-050 men; and our 180 Harvesters will displace 3,600 in addition, or 16,650 laborers. In this estimate we count the day's work of the Reaper at 12 acres, and of a Harvester at 16 acres, each being run with four horses—the latter attended by four men.

Sheltering Manure.

Manure which is protected from evaporation or washing, is richer or stronger than that which is exposed. The advantage of cellars for manure, is that they keep the manure in its natural condition, unchanged, and therefore secured against waste. The system of feeding stock in "boxes," now considerably practiced in England, is recommended, partly on account of the better quality of manure so produced. The animals are kept thoroughly littered, so that all the urine is absorbed. We do not discover that the system has any advantages over our mode of feeding in barns and depositing the solid and liquid manure, properly mixed with absorbing substances, in cellars or under sheds.

The following analysis, made at the English Agricultural College, shows the difference in box manure and yard manure—or that which had been sheltered and that which had been exposed in a yard, in the ordinary manner:

	Box Manure. Per cent.	Yard Manure Per cent.
Water	71.04	71.00
Nitrogenised matter, capable of yielding ammonia, 100 parts *dried*	2.37	1.07
Salts soluble in water, containing organic and inorganic matter	10.07	4.06
Organic	5.42	1.82
Inorganic	4.28	2.78
Phosphoric acid	0.03	0.26
Alkalies—Potash and soda	2.00	0.08

Vegetable Manures.

Nature, when untramelled by art, rears most luxuriant crops upon her fields, and yet the surface continually increases in fertility, never exhausted, but becoming richer each succeeding year. Let us suppose some few seeds to be borne by the wind from a distance to some naked surface entirely destitute of tree, shrub, or even a blade of grass, but still of a nature fitted to support vegetation, i. e. containing the inorganic constituents of plants. The seeds take root, and struggling, at length send forth their tender leaflets to the light. The process of vegetation then goes on with greater rapidity; the dew of heaven, or the grateful shower supplies it with certain necessary constituents, and its leaves gather the carbonic acid contained in the air. Thus the plant comes to maturity and then withers and dies, but all the elements which it has drawn from the earth are returned to it, and besides, a large amount of carbon, which has been gathered almost wholly from the atmosphere. As the tender plant of a succeeding year springs up, it receives part of its substance from the decaying vegetable matter of a previous growth; a more vigorous vegetation is the result, and still the deposite of the previous year is only in part taken up by the second growth; thus there is an accumulation of carbonaceous matter from year to year. If the vegetation thus springing up, be of such a nature that the plants do not die annually, but flourish for years and even centuries; still there is a continual accumulation of vegetable matter by reason of the annual deposits of leaves and decayed branches; such deposits give the soil a dark rich appearance, and when the land has been cleared and broken up, it yields fine crops for a long time. In many localities, the carbonaceous matter, having accumulated for centuries in the manner described, has become so thoroughly incorporated with the soil, extending sometimes to the depth of several feet, that the fields will continue fertile for many years; such is the condition of the prairies of the west. When the substances mentioned accumulate upon the surface of low swampy grounds, they do not become mixed with the soil, but there is finally presented, a deposite of black, half decomposed vegetable matter; this material has received the names, *vegetable mold, muck*, and *peat*.

We learn from the natural changes given, that nature has made ample provisions for the return of the raw material of which plants are made, to the soil; and she does not stop here, but continually increases the fertility of her fields, providing a surplus of vegetable nourishment.

The art of cultivation should so far imitate nature as to supply a sufficient return for the matter taken from the soil by each crop. Not that there should be a return weight for weight, for that would be impossible and wholly unnecessary, but unless the soil has a bountiful supply of fertilizing material, the process of continued cropping will immediately exhaust it. There is no more economical method of preventing this result than the application of vegetable manures, either in the form of refuse straw, hay, &c., of the farm-yard, or that of vegetable mold from the swamp; not that these substances alone will in all cases be sufficient, but they are easily obtained and contain most of the constituents of plants.—*Eaton's Agricultural Chemistry.*

Nutriment in different Crops.

The different kinds of crop usually raised differ materially in the proportions which they contain of the different essential constituents now enumerated, as required for the support of animals, and the practical deductions to be derived from the chemistry of the subject, will at once be apparent from an examination of the following tables. If we suppose an acre of land to yield the following quantities of the usually cultivated crops, namely:—

Of wheat.........	25	bushels,	or	1500 lbs.
Of barley.........	35	—	or	1800 —
Of oats......	50	—	or	2100 —
Of peas...........	25	—	or	1600 —
Of beans.........	25	—	or	1600 —
Of Indian corn....	30	—	or	1800 —
Of potatoes.......	12	tons,	or	27,000 —
Of turneps........	30	—	or	67,000 —
Of wheat straw...	—	—		3000 —
Of meadowhay...	1½	—	or	3400 —
Of clover hay.....	2	—	or	4500 —

The weight of dry starch, sugar, and gum,—of gluten and albumen—of oil or fat, and of saline matter, reaped in each crop, will be represented very nearly by the following numbers:—

	Woody. Fibre,	Starch, Sugar, &c.	Gluten & Albumen,	Oil or Fat,	Saline. Matter.
Wheat,	220	825 lbs.	180	45	30
Barley,	270	1080	210	50	36
Oats,	420	1050	290 !	100	75
Peas,	130	800	380	35 !	45
Beans,	160	640	450	40	50
Indian corn,	270	900	180	150	30
Potatoes,	1350	3240	600 !	90	24
Turneps,	2000	6700	800 !	335 !	600
Wheatstraw	1500	900	40	60	15
Medowhay,	1020	1760	240	120	230
Clover hay,	1120	1800	420	200	400

—*English Paper.*

Agricultural Shows.

NEW-YORK STATE SOCIETY.—At Syracuse, 12th, 13th, and 14th of September.

WAYNE COUNTY, N. Y.—At Palmyra, 26th and 27th of September. The same society will hold an exhibition at Rose Valley, the 3d and 4th of October.

ONEIDA COUNTY, N. Y.—At Hampton, 26th and 27th of September.

MARYLAND STATE SOCIETY.—At Baltimore, 10th, 11th, and 12th of October.

SUFFOLK COUNTY, N. Y.—At Greenport, October 2d.

HERKIMER COUNTY, N. Y.—At Herkimer, 27th September.

WOOL DEPOT.—Mr. H. BLANCHARD, of Kinderhook, has erected a large building for a wool depot, at Sam-ham landing, on Lake Champlain. So far as we learned, in our late visit to this section, it is the general intention of the wool-growers to send their wool to this depot. We were pleased to notice the improvement which has been made in cleansing and putting up fleeces for market.

HORSE-CHESTNUTS MADE EDIBLE.—The bitter, green oil, is removed by first grating them to a pulp, then adding one-fiftieth (1-50) by weight of carbonate of soda. The mixture is then thoroughly washed and racked, by means of a clear fountain, and a white and agreeable paste subsides, which is manufactured into bread and cakes.

ANTIDOTE TO POISON.—It is said that a desert spoonful of ground mustard, mixed in a tumbler of warm water, and drank immediately, acts as a speedy emetic and may be used with safety. In the absence of anything better, a large draught of warm water is one of the best general antidotes for poison, as its immediate tendency is to dilute it and soften its virulence, and induce vomiting.

BLACK ANTS.—Gum Camphor laid in the tracks of ants is said to be excellent for keeping away these troublesome insects.

Domestic Economy, Recipes, &c.

Useful Recipes.

Eds. Cultivator—Will you please to publish the following method of making good bread with flour of grown wheat.

With a large spoon or stick, stir boiling water into the flour; then, to cool it before putting in yeast, mix in more flour and cold water. Work in enough flour to prevent its spreading out flat in the pans.

Cure for Dysentery.—The following recipe may prove of more value to many of your readers than their subscriptions for your paper.

To check a dysentery or summer complaint. Equal parts of sumach leaves or bark, catnip and peppermint; steep in hot water; drink frequently, and use for injections. In these complaints, especially in the dysentery, the bowels become coated with canker, which comes off, together with their lining, often accompanied with blood and mucus, which leaves them so raw and inflamed, that their contents moving through them causes excruciating pain. This decoction will cleanse the bowels, and to assist their healing, take powders or pills of Cayenne pepper, and use a tea of the same. To make the sumach "drink" palatable, put in it the seeds, (which are very acid,) and sweeten it.

Neither *these*, nor *any* medicine will avail in these complaints, if a strict diet is not observed. A person would sooner recover on rice water alone, *without* medicine, than *with* medicine and hearty food.

W. L. F. *Milwaukie, Wis., June* 11, 1849.

Butter—Is improved by working the second time after the lapse of 24 hours, when the salt is dissolved, and the watery particles can be entirely removed.

Raspberry Syrup.—To every quart of fruit add a pound of sugar, and let it stand over night. In the morning, boil and skim it for half an hour; then strain it through a flannel bag, and pour it into bottles, which must be carefully corked and sealed. To each bottle add, if you please, a little brandy, if the weather is so warm as to endanger its keeping.

Raspberry Jam.—Take one pound loaf sugar to every pound of fruit; bruise them together in your preserving-pan with a silver spoon, and let them simmer gently for an hour. When cold put them into glass jars, and lay over them a piece of paper saturated with brandy; then tie them up so as carefully to exclude the air.

Blackberry Syrup.—We are indebted to a friend for the following receipt for making blackberry syrup. This syrup is said to be almost a specific for the summer complaint. In 1832 it was successful in more than one case of cholera.

To two quarts of juice of blackberries, add one pound loaf sugar, ¼ oz. nutmegs ¼ oz. cinnamon, pulverised, ¼ oz. cloves, ¼ oz. alspice, do. Boil all together for a short time, and when cold, add a pint of fourth proof brandy. From a teaspoonfull to a wine glass, according to the age of the patient, till relieved, is to be given.

Currant Jelly—Place the currants in a stone or glass jar, and suspend this jar in a vessel of boiling water until the currants are in a condition to yield their juice readily; then place them, while hot in a bag, and press out the juice; add pure double-refined loaf sugar, and then boil until it jellies: this point is ascertained by dropping a portion on a cold plate, and if it will hold ast with the plate upside down, it is done, and should be removed from the fire. Should any scum arise, it may be skimmed off. Put the jelly, while hot, into ars, and cover tightly. Our experiment last year reulted thus: Twenty-seven quarts of currants gave wenty-nine pints of juice, and with twenty-nine pounds of double-refined sugar, gave eighteen and a half quarts of very superior currant jelly. Those who suppose that currant jelly can be made with common brown sugar, or even with inferior loaf sugar, will find themselves without a market, as an inferior article cannot be sold.—*Selected.*

Small Beer.—For making three gallons of beer, take one quart of molasses, 20 drops oil of spruce, 15 drops oil of winter-green, 10 drops oil of sassafras; add hot water to make the requisite quantity; mix the ingredients well; let the liquor stand till it is blood-warm, then add one pint of yeast; let it remain ten or twelve hours; bottle it, and in three hours it is fit for use.

Answers to Correspondents.

Turneps with Corn.—F. G. R., Shadwell, Va. On rich land very good crops of English turneps are sometimes obtained, by scattering the seed broadcast over the ground at the time of the last hoeing. If the season is dry, the turneps seldom amount to much; but if it is sufficiently wet, they will grow well, after the stalks are topped; or if the stalks are not cut, and the corn is cut up and shocked at the proper time, the turneps, having the ground to themselves through the autumn, will acquire a good size.

Cisterns for Watering Stock.—W. J. P., Lakeville, Ct. There is no objection to watering stock from cisterns, properly made. Make them so deep in the ground that they will not be much affected either by the heat or cold of the atmosphere.

Whitford's Corn-Sheller.—W. E. W., Peoria, Ill. We have no information in regard to this implement, except what is contained in the article to which you allude—Cultivator for 1843, p. 34.

Dairy Salt.—P. W., Herkimer, N. Y. Pure rock salt, ground fine, has generally given satisfaction, for the preservation of butter. The article is prepared in a nice manner by C. N. Bement, of this city, and put up in bags of twenty pounds each.

THE FLOWERS.

BY MRS. E. C. KINNEY

Where'er earth's soil is by the feet
  Of unseen angels trod,
The joyous flowers spring up to greet,
  These visitants of God.

They on celestial errands move
  Earth noiselessly to bless,
Oft stooping down in balmy love,
  The flowerets to caress.

And thus, their breath its fragrance leaves
  Among the woodland blooms,
And breathing sense, through flowers receives
  Angelical perfumes.

The scarlet or the crimson tips
  That flowery petals wear,
May be the vermeil from the lips
  Of angels painted there.

While spirit-whispers safely lie
  Within each chalice lid,
That mutely speak to Sorrow's eye,
  And lift its drooping lid.

And ah, that crystal, glistening clear
  Upon the tinted leaf,
May be an agel's holy tear,
  Dropt there for human grief.

Forever hallowed then, as fair,
  Are all the blessed flowers,
That scent with Heaven's ambrosial air
  These fading earthly bowers.

Through flowers Love finds fit utterance,
  And friendship solace lends:
For he that giveth Flowers perchance
  An angel's message sends.

Notes for the Month.

Communications, have been received since our last, from Agricola, Newton Reed, Viator, T. J. R. Keenan, S. of N. R., J. H. Salisbury, A. S. Casseman, Wm. J. Pettee, Ambrose Stevens, A Farmer, Cyrus Bryant, L. D., R. H. Phelps, J. D. Patterson.

Books, Pamphlets, &c., have been received since our last as follows:—"Service-Pipes for Water," an investigation made at the suggestion of the Board of Consulting Physicians of Boston, by E. N. Horsford; from the author. "Illustrated Phrenological Almanac," by L. N. Fowler; from the publishers, Fowler & Wells, New-York. "Diseases of Winter"—Consumption, Coughs, Asthma, &c., their remedial and avertive treatment, by R. J. Culverwell, M. D.; from the publisher, J. S. Redfield, New-York.

H. R. R. The apples mentioned by you, never arrived.

Seedling Cherry.—A cherry, raised from seed by Dr. H. Wendell, of this city, has received the name of "Wendell's Mottled Bigarreau." From some specimens which we have received, we think it is a valuable variety. It is nearly as large as the Black Tartarian, and of a rich and excellent flavor.

Samples of Wool.—Mr. J. D. Patterson, of Westfield, Chautauque county, N. Y., has sent us handsome samples of wool from a yearling ram and ewe, imported from France by Mr. Taintor, of Hartford, Ct., in July, 1848. The weight of the fleeces is given as follows: ram 14 lbs. 8 oz.; ewe 10 lbs. 10 oz. The latter raised a lamb. Mr. P. says, "their wool was first well rubbed with soap, and they were then thoroughly washed in a clear stream of running water, and sheared as soon as they were dry."

Albany and Rensselaer Horticultural Society.—We had no opportunity of noticing the exhibitions of this society, held on the 20th of June and the 3d of July, as our June number had previously gone to press. The display on both occasions was highly creditable. At the first exhibitions the show of strawberries was very fine, and that of cherries equally so at the second. The premium for the best variety of strawberries was awarded to B. B. Hirtland, of Greenbush, for *Burr's New Pine*; for the best variety of cherry, (July 3d.) to E. E. Platt, of Albany, for *Black Tartarian*.

The exhibition of the 25th of July, in respect to gooseberries and currants, was superior to any ever held by the society. It was rather late in the season for raspberries and cherries, and the display of flowers, of out-door culture, was much lessened on account of the severe drouth. James Wilson, of Albany, presented forty-one varieties of gooseberries, receiving the premium for the greatest collection; and Henry Vail, of Troy, presented seventeen varieties, receiving the premium for the best collection and finest specimens. The premium for the best raspberry was awarded to H. Vail, for the *Falstolf*; for the best currant, to Jas. Wilson, for *Knight's Sweet*; for the best cherry, to Dr. H. Wendell, for *Wendell's Mottled Bigarreau*. Fine specimens of corn for boiling were offered by Mr. Douw and Mr. Kirtland, of Greenbush; and fine specimens of tomatoes, egg-plants, potatoes, cabbages, &c., by Messrs. Prentice, McIntosh, and others. Flowers were offered by Messrs. Rathbone, Douw, Wilson, Newcomb, Wendell, and others.

The Horse "Tornado."—When returning from our late excursion to Vermont, we called at Mr. E. Long's, Cambridge, N. Y. Mr. L. is extensively known as a breeder of blood horses, having been engaged in the business thirty years, and been the owner of several celebrated horses. He now owns "Tornado," a horse of much distinction on account of his blood and performances on the turf. He was by the famous American Eclipse, out of the noted mare Polly Hopkins. Tornado is now eleven years old. He was put on the course at an early age, and won several races with horses of repute; but was withdrawn in consequence of an injury received in one of his pasterns, while running. He will be recollected by some, as having received the first premium on blood horses at the N. Y. State Fair, at Saratoga. He is a horse of attractive appearance—has a fine head and eye, a beautiful glossy coat and clean limbs. It is thought he will make a good cross with the stock of the neighborhood. We saw none of his progeny, except a sprightly yearling colt, and a very pretty and active filly, two months old, from a thorough bred mare belonging to Mr. Thomas Fowler, of White Creek. Mr. Long showed us a black mare, three-fourths blood, as he informed us—a very handsome animal, and a fine traveller.

Stock for Sale.—Persons wishing to obtain fine stock, are referred to the advertisements, in this number, of Messrs. Bingham, Tilden, and Fairbanks. It will be seen that the gentleman first named, propose to offer cattle and sheep for sale at the State Fair at Syracuse. This occasion will undoubtedly afford an excellent opportunity for the purchase of good stock of all kinds.

Protection for Roses and tender Plants.—During a late call at the residence of J. S. Pettibone, Esq., Manchester, Vt., we were informed of a mode of protecting roses and tender plants from injury by frost, which we think valuable. Before winter sets in, small spruce trees, about four feet high, (which are readily obtained in many situations,) are, after they have been sharpened and the lower limbs taken off, set as *stakes* for the support of the shrubs. The shrubs are fastened round the stakes, and small hemlock, or cedar boughs, are placed round in a conical form, in sufficient quantity, (and but a thin layer is required, as they pack closely and exclude the air), to afford the desired protection. They remain in this situation till warm weather returns, when the boughs and stakes are removed. The spruces keep green all winter, and impart, during that dreary season, an enlivening aspect to the *parterre*.

Cotton Cloth Caps for Haycocks.—These have been tried in the eastern States with great success. They are two yards square, made by sewing two pieces of yard-wide sheeting together, with a stout hem at the ends, about two inches of the corners sewed back to which strong cord loops are attached. Through each of these loops a sharp stick, a foot and a half long, is thrust into the hay, which secures it to its place. The cost is 30 cents each; that is, four yards, at [illegible] cents per yard, and two cents for twine and thread. If made during the long winter evenings, the cost of making need not be counted. The rain cannot wet the hay while these caps are on; and damaged hay, and tedious drying after showers, are done away. Now is the time to use them.

The Wheat Crop.—Accounts from the south are generally favorable for the wheat crop. In the central and southern portions of Ohio, it is injured by rust, which struck in the latter part of June, and also by the wheat midge. From northern Ohio, we have heard no complaint. In Michigan, we learn from Mr. M[illegible]lary, of Macomb county, that the crop is promising. He says the crop was sowed late for fear of the insect, [Hessian fly ?] and no injury from that source had been experienced. From Illinois and Wisconsin we hear favorable reports. In our own State, we believe the crop is as good as usual, though injured by the midge to some extent in the Western part of the State.

Postponement of the Ohio State Fair.—We learn that the Ohio Board of Agriculture have concluded not to hold a State Fair this year, on account of the prevalence of the Cholera in Cincinnati and other sections of the State.

Syrian Cattle.—We have seen it stated that Lieut. Lynch, U. S. N., brought to this country on his return from the Dead Sea expedition, a pair of calves, purchased at Damascus. It is said they have been placed in possession of Col. James Castleman, of Clarke county, Va. We have as yet seen no *authentic* account or description of these cattle. Will Col. Castleman, or some person acquainted with the animals, be good enough to give us their history and characteristics.

Fattening Cattle on Hay.—Grass which is cut while it is in blossom, and carefully made, will fatten stock nearly as well in a dry, as in a green state. Some of the best farmers in the western part of Vermont, are particular in making their hay for this purpose. Mr. Bowdish, of Weybridge, whose stock is well known for its good qualities, and fine condition, informed us that he found no difficulty in making his cattle thrive on hay. His oxen and steers are fed liberally on the best of hay through the winter. With careful driving, they perform the farm labor in spring without loss of flesh, and being turned on sweet pastures, at the proper time, they get in high order for early beef for the Boston market, and always command a good price.

Keeping Hens.—Mr. J. M. Mason, of Orwel, Vt., usually winters two hundred hens. His practice is, to buy pullets in the month of November. He buys those which were hatched early, as such are the best to lay in the winter. They cost about twelve and a half cents each. They are fed in a great degree on *mutton*. Mr. M. buys sheep in the fall at low prices—about what their pelts and tallow are worth. The carcasses are boiled, the tallow saved, and the flesh and bones, after being allowed to freeze, are kept till spring,—a suitable portion being fed to the hens daily. They are allowed, in addition to the meat, a little corn, oats, or buckwheat. They lay well through the winter—comfortable quarters being provided for them—and continue to produce eggs in abundance till June. It is found most profitable to sell the whole stock at this period, as they are generally fat, and will bring from twenty to twenty-five cents a-piece. If kept through the summer, they lay but little in the warm mouths, the eggs will keep but a short time, the fowls grow poor in moulting, and if kept another year will not lay as well as young ones. Mr. M. keeps hens only, (no cocks,) and is inclined to think he obtains as many eggs, and that they keep better when not impregnated. As to varieties, he has tried several, and thinks the *top-knots* will generally lay rather more eggs the first season; but their carcasses are of less value than most other kinds.

Maple Sugar.—The last spring was a favorable one for the manufacture of maple sugar. Vermont, as usual, produced a large quantity—we have no means of knowing how much, but is an article of great value to he state. We are informed that the process of making as been much improved within a few years. Instead of boiling the sap in cast-iron kettles, it is boiled in hallow pans and cooled in wooden or tin vessels. The ugar is thus freed from the dark color and *irony* taste which it almost always had when made in the old mode. n our late trip to Vermont, we saw some very handome samples of maple sugar, particularly at Mr. Hines', in Brandon, and Mr. Dean's, in Manchester. Mr. H.'s was a sample of about five hundred pounds, which was of such a quality that it would have sold by he quantity for 12½ cents per pound. Maple trees ield from two to four pounds of sugar each, in a season, and a good "grove" affords a handsome edition to the income of a farm.

Mowing Pastures.—We have before spoken of the necessity of keeping the grass of pastures from running up to seed and dying on the ground. As grass grows with more rapidity in the early part of the season than at a later period, it is difficult to keep it properly fed down, without putting on more stock than can be kept on the land after the *flush* of feed is over; and yet, if the grass goes to seed and lies on the ground, the after-feed will be less in quantity and of poorer quality. The difficulty may be overcome by mowing the grass at the right time—before it has run to seed, at all events. This may be done on many pastures to good advantage, the hay obtained being of good quality for any kind of stock; and the pastures are left clean, start equally, and afford a good growth of fresh after-feed. We have lately met with several farmers who have followed this practice for many years, and they agree with us in regard to its utility.

Usefulness of Swallows.—While visiting a friend in the country, a few weeks since, we noticed, under the eaves of a barn, near the dwelling, about fifty swallows' nests. The bird was the *Hirundo fulva*, or Cliff-swallow, of ornithologists. In most of the nests there were young, and the old birds were very assiduous in providing them with food. We observed them at different times in the day, and not a minute elapsed in which one or more birds did not return to the nests with something for the young. Their food consisted of winged insects taken in the air; and the numbers which were thus destroyed by this colony of swallows, must have amounted to thousands, each day. We were informed that no flies, or very few, were to be seen around the house or barn—the family and the domestic animals of the farm, being thus freed from a disagreeable annoyance.

Large Corn Crop.—The *Ohio Cultivator* states that John Longbry of Adams Co. raised 1500 bushels of shelled corn on eleven acres, or 136¼ bushels per acre for the whole field.

Prices of Agricultural Products.

New-York, July 24, 1849.

FLOUR—Genesee, per bbl., $5.06*a*$5.18¾—Western, $4 75*a* $4.81.—Fancy Brands, $5.50*a*$5.62½.

GRAIN—Wheat, per bush., $1.16*a*$1.25—Corn, 56*a*60c.—Rye, 57½c Oats, 34*a*35c.

BUTTER—best, per lb., 18*a*20c.—western dairy, 12½*a*14c.

CHEESE—per lb., 5*a*6c.

BEEF—Mess, per bbl., $13*a*$13.50.

PORK—Mess, per bbl., $11—Prime, $9*a*9.12½.

LARD—per lb., 6¾*a*7½c.

HAMS—Smoked, per lb., (best) 12½*a*14c.—Western 7c

HOPS—per lb., first sort, 6*a*8c.

COTTON—Upland and Florida, per lb., 9¾*a*10c.—New Orleans and Alabama, 7½*a*9½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40*a*43c.
American full blood Merino,	36*a*38c.
" half blood do.,	31*a*33c.
" one-fourth blood and common,	29*a*30c.

Remarks.—There is a general buoyancy in the market. Cotton brisk and in demand. Flour and meal in good demand for the east. Provisions are firm, and prices for meats generally upward. There is a fair business in wool,—prices tending upward.

To Nurserymen, Gardeners and Horticulturists.

HAVING completed my arrangements with nurserymen in England, France and Belgium, I am prepared to import from any of the above places, any thing required in the business, on the most favorable terms, and special attention given to the forwarding without delay, all goods imported by me or consigned to my care by others.

I will also give personal attention to the purchase or sale of any thing in this market, or neighboring nurseries, for distant nurserymen. Being advised of the various stock in the different nurseries, I can always do this to advantage.

FOR SALE.—Russia Mats, Osage Orange Seed, Plum and Cherry pits, Propagating glasses of all sizes, Flower pots, &c., at

GEO G. SHEPPARD'S

Horticultural Agency, 145 Maiden Lane, New-York.

August 1.—1t

Syracuse Nurseries.

Thorp, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of *fruit trees* alone, embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and *youthful* growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated NORTHERN SPY, *from seven to nine feet in height*, which they will continue to supply, as heretofore, in an assortment with others, at the *same rate*. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the *Hawley*, the *Green Sweeting*, the *Ladies' Sweeting*, *Peck's Pleasant*, *Swaar*, *Baldwin*, *Spitzenburg*, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the *Onondaga*, *Oswego Beurre*, and *Van Mon's Leon Le Clerc*. Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "*first rate*" Persons desiring to buy at *wholesale*, can be supplied on the most liberal terms, and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters, they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flatteringly bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by *post-paid* application to the proprietors.

August 1.—3t.

Sale of Hereford Cattle.

THE Messrs. BINGHAM, of Vermont—brothers—propose to sell at public auction, on the Show Ground of the New-York State Fair at Syracuse, from ten to twenty head of Hereford Cattle, 3 years old and under—bulls and heifers. Our cattle—Herefords—to found our herd, were purchased of Messrs. Corning and Sotham, about three years ago. We have been disposed to give these cattle a fair trial, to see what their merits would prove to be, before offering them to the public. We have come to the conclusion that no race of cattle can compete with them when all their good qualities are taken into consideration. We are resolved to push ahead in the cultivation of the Herefords, as being a race, affording the best profits for keep and care, and proving themselves first class cattle for all the purposes of the breeder. They make a noble cross with the Durhams or their grades, as well as with the native stock, showing a great and decided improvement. We offer these cattle to the public with the strong conviction that they will prove a desirable acquisition to any herd.

PURE BRED MERINO SHEEP.

We shall also offer at private sale, a large lot of pure bred Merino Sheep, from imported sires. The breeders of sheep will do well to look over our flocks, before purchasing elsewhere. We sell no mongrels, or grades, or worthless sheep for great prices;—but we mean to deal fairly with those who purchase of us, and sell them our best blooded sheep, at fair remunerating prices—so that they shall prove a decided improvement to the flocks with which they may be placed.

August 1.—1t.

Hereford Bull.

FOR sale by the subscriber, a full blood Hereford Bull, from the herd of Messrs. Corning & Sotham, Albany, N. Y. Said bull is six years old, and for symmetry of form, size, and the thrift and excellence of his stock, is probably unsurpassed by any bull in the State.

J. P. FAIRBANKS.

St. Johnsbury, Vt., Aug. 1.—3t.

Saxon Sheep.

THE subscribers having disposed of their pasture lands, now offer their entire flock for sale. They will also offer about 70 Bucks and Buck Lambs at auction, at Syracuse, on Wednesday or Thursday, the 12th or 13th of September next, on the grounds of the State Fair. Of time, due notice will be given

New Lebanon, N. Y., July 13, 1849. TILDEN & CO.

We refer to,
H. Blanchard & Co., Kinderhook Wool Depot.
Samuel Lawrence, Esq., Lowell
Sanford Howard, Esq., Albany.
August 1.—2t.

A Small Farm Wanted.

A Letter addressed to C. S., Newport, N. Y., will receive attention.

August 1.—2t. *

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July.) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* GARDENING, *in a thoroughly practical as well as scientific sense.*

2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*

3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*

4. *To* RURAL ARCHITECTURE, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators, and it is scarcely necessary to repeat, that Mr. DOWNING's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect. Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'." he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown to be of a dangerous tendency. These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one.

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES

Physic balls, 75c. per box.
Alterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Loree Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. June 1.—3t

The Farmer's Encyclopædia,

IN one volume, royal octavo, 1165 pages, beautifully bound; containing 17 fine plates, and numerous wood cuts. Edited by **Gouverneur Emerson**. A standard work of reference upon all subjects connected with farming and country life.

"Of all the Agricultural works that have been lately published, this appears the most likely to be of real service to the practical farmer."—*Central New-York Farmer.*

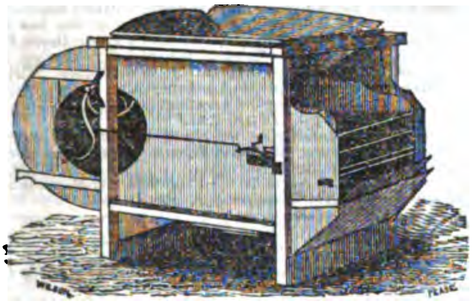
"It is a mine of wealth—no farmer should be without this truly valuable book."—*Burlington Gazette.*

Sold by Carey & Hart, *Philadelphia*; C. M. Saxton and John Wiley, *New-York*; Luther Tucker, and W. C. Little, *Albany*; Derby & Co., *Buffalo*; W. D. Ticknor & Co., and B. B. Mussey, *Boston*; W. H. Derby & Co., and Ely & Campbell, *Cincinnati*; Whiting & Huntingdon, *Columbus*; Norton & Beckwith, *Louisville, Ky*; J. B. Steel, and Woodbridge & Co., *New Orleans*; M. Boullemet, *Mobile*; W. D. Skillman, *St. Louis*; N. Hickman, *Baltimore*; A. Morris, *Richmond, Va.*; H. D. Turner, *Raleigh, N. C.*; F. Taylor, *Washington, D. C.*

July 1, 1849.—1t.

I. T. Grant & Co.'s

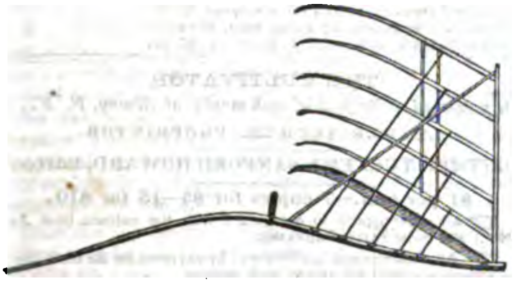
PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon. J R Poinsett, of South Carolina:—"The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—"Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T GRANT & CO.
Junction P. O., Rens. Co., 8 miles north of Troy.
May 1, 1849.—8t. eom.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of **George Bommer**, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,
New-York, Jan., 1849.—tf GEO. BOMMER, Director.

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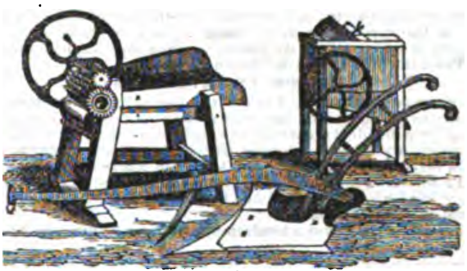

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American Agriculture, by R. L. Allen, $1.
—— Shepherd, by L. A. Morrell, $1
—— Poulterer's Companion, by C. N. Bement, $1.
—— Veterinarian, by S. W. Cole. 50 cents.
—— Herd Book, by L. F. Allen, $3.
—— Farmers' Encyclopedia, $4.
—— Flower Garden Directory, by R. Buist, $1.
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" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
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Domestic Family Receipt Book, by Miss Beecher, 75 cents.
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Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruit Culturist, by J. J. Thomas, 50 cents.
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Farmers' Dictionary, by Prof. Gardener, $1.50
Farmers' Companion, by Judge Buel, 75 cents.
Lanscape Gardening, by A. J. Downing, $3.50.

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, SEPTEMBER, 1849. VOL. VI.—NO. 9.

Suggestions for Farmers.

Changes in Permanent Pasture or Meadow.

EDITORS OF THE CULTIVATOR—I am aware that the numerous correspondents of *The Cultivator* keep its pages so well stored with original communications, as quite generally to preclude the publishing of lengthy extracts from other sources. But the following remarks of Prof. JOHNSTON, upon "Permanent Pasture or Meadow," evince so much accurate and extensive observation, and, withal, so entirely correspond with the experience of intelligent farmers, that they may well find a place, at some time, in your columns. With this view, I have transcribed the accompanying extract, and if you think as I do about it, just present it to your readers whenever you find room for it, and I doubt not, the perusal will interest them. F. HOLBROOK.

When land is laid down to permanent grass, it undergoes a series of changes, which have frequently arrested attention, and which, though not difficult to be understood, have often appeared mysterious and perplexing to practical men. Let us consider these changes.

a. When grass seeds are sown for the purpose of forming a permanent sward, a rich crop of grass is obtained during the first, and perhaps also, the second year, but the produce, after three or four years, lessens, and the value of the pasture diminishes. The plants gradually die and leave blank spaces, and these again are slowly filled up by the sprouting of seeds of other species, which have either lain long buried in the soil or have been brought thither by the winds.

This first change, which is almost universally observed in fields of artificial grass, arises in part from the change which the soil itself has undergone during the few years that have elapsed since the grass seeds were sown, and in part from the species of grass selected not being such as the soil, at any time, could permanently sustain.

b. When this deterioration, arising from the dying out of the sown grasses, has reached its utmost point, the sward begins gradually to improve, natural grasses suited to the soil, spring up in the blank places, and from year to year, the produce becomes greater and greater, and the land yields a more valuable pasture. Practical men often say that to this improvement there are no bounds, and that the older the pasture, the more valuable it becomes.

But this is true only within certain limits. It may prove true for the entire currency of a lease, or even for the life-time of a single observer, but it is not generally true. Even if pastured by stock only, and never mown—the improvement will at length reach its limit or highest point, and from this time the value of the sward will begin to diminish.

c. This, again, is owing to a new change which has come over the soil. It has become, in some degree, exhausted of those substances which are necessary to the growth of the more valuable grasses—less nutritive species, therefore, and such as are less willingly eaten by cattle, take their place.

Such is the almost universal process of change which old grass fields undergo, whether they be regularly mowed, or constantly pastured only—provided they are left entirely to themselves. If mown, they begin to fail the sooner, but even when pastured they can be kept in a state of full productiveness only by repeated top-dressings, especially of saline manures—that is, by adding to the soil those substances which are necessary to the growth of the valuable grasses, and of which it suffers a yearly and unavoidable loss. Hence the rich grass lands of our fathers are found now, in too many cases, to yield herbage of little value. Hence, also, in nearly all countries, one of the first steps of an improving agriculture, is to plow out the old and failing pastures, and either to convert them permanently into arable fields, or, after a few years' cropping and manuring, again to lay them down to grass.

But when thus plowed out, the surface soil upon old grass land is found to have undergone a remarkable alteration. When sown with grass seeds, it may have been a stiff, more or less grey, blue, or yellow clay—when plowed out, it is a rich, brown, generally light and friable vegetable mould. Or when laid down it may have been a pale-colored, red, or yellow sand or loam. In this case, the surface soil is still, when turned up, of a rich brown color—it is lighter only, and more sandy than in the former case, and rests upon a subsoil of sand or loam, instead of one of clay. It is from the production of this change that the improvement caused by laying land down to grass principally results. In what does this change consist? and how is it effected?

If the surface soil upon stiff clay lands, which have lain long in grass, be chemically examined, it will be found to be not only much richer in organic matter, but often also poorer in alumina than the soil which formed the surface when the grass seeds were first sown upon it. The brown mould which forms on lighter lands will exhibit similar differences when compared with the soil on which it rests; but the proportion of alumina in the latter being originally small, the difference in respect to this constituent, will not be so perceptible.

The effect of this change on the surface soil is in all cases to make it more rich in those substances which cultivated plants require, and therefore more fertile in corn. But strong clay lands derive the further important benefit of being rendered more loose and friable, and thus more easily and more economically cultivated.

The mode in which this change is brought about is as follows:—

1. The roots, in penetrating, open and loosen the subjacent stiff clay. Diffusing themselves everywhere *they gradually raise, by increasing the bulk of the surface soil*. The latter is thus converted into a mixture

of clay and decayed roots, which is of a dark color, and is necessarily more loose and friable than the original or subjacent unmixed clay.

2. But this admixture of roots affects the chemical composition, as well as the state of aggregation of the soil. The roots and stems of the grasses contain much inorganic—earthy and saline—matter, which is gathered from beneath wherever the roots penetrate, and is by them sent upwards to the surface. A ton of hay contains about 170 lbs. of this inorganic matter. Suppose the roots to contain as much, and that the total annual produce of grass and roots together amounts to four tons, then about 680 lbs. of saline and earthy matters are every year worked up by the living plants, and in a great measure permanently mixed with the surface soil. Some of this, no doubt, is carried off by the cattle that feed, and by the rains that fall, upon the land—some remains in the deeper roots, and some is again, year after year, employed in feeding the new growth of grass—still a sufficient quantity is every season brought up from beneath, gradually to enrich the surface with valuable inorganic matter, at the expense of the soil below.

3. Nor are mechanical agencies wanting to increase this natural difference between the surface and the under soils. The loosening and opening of the clay lands by the roots of the grasses, allow the rains more easy access. These rains gradually wash out the fine particles of clay that are mixed with the roots, and carry them downwards, as they sink towards the subsoil. Hence the brown mould, as it forms, is slowly robbed of a portion of its alumina, and is rendered more open, while the under soil becomes even stiffer than before. This sinking of the alumina is in a great measure arrested when the soil becomes covered with so thick a sward of grass as to break the force of the rain-drops, or of the streams of water by which the land is periodically visited. Hence the soil of some rich pastures contains as much as 10 to 12, of others as little as 2 to 3 per cent. of alumina.

4. The winds also here lend their aid. From the naked arable lands, when the weather is dry, every blast of wind carries off a portion of the dust. This it suffers to fall again, as it sweeps along the surface of the grass fields—the thick sward arresting the particles and sifting the air as it passes through them. Everywhere, even to remote districts and to great elevations, the winds bear a constant *small* burden of earthy matter; but there are few practical agriculturists who, during our high winds, have not occasionally seen the soil carried off in large quantities from their naked fields. Upon the neighboring grass lands this soil falls as a natural top-dressing, by which the texture of the surface is gradually changed, and its chemical constitution altered.

5. Another important agency also, must not be overlooked. In grass lands insects, and especially earthworms abound. These almost nightly ascend to the surface, and throw out portions of finely divided earthy matter. On a close shaven lawn the quantity thus spread over the surface in a single night often appears surprising. In the lapse of years, the accumulation of the soil from this cause must, on old pasture-fields, be very great. It has often attracted the attention of practical men,[*] and so striking has it appeared to some, that they have been inclined to attribute to the slow but constant labor of these insects, the entire formation of the fertile surface soils over large tracts of country.

I have directed your attention to these causes chiefly in explanation of the changes which by long-lying in grass, the surface of our stiff clay land is found to undergo. But they apply equally to other soils also—the only difference being that, in the case of such as are already light and open, the change of texture is not so great, and therefore does not so generally arrest the attention.

Upon this subject I may trouble you further with two practical remarks—

1. That the richest old grass lands—those which have remained longest in a fertile condition—are generally upon our strongest clay soils. This is owing to the fact that such soils naturally contain, and by their comparative impermeability *re*-tain, a larger store of those inorganic substances on which the valuable grasses live. When the surface soil becomes deficient in any of these, the roots descend further into the subsoil, and bring up a fresh supply. But these grass lands are not on this account exempt from the law above explained, in obedience to which all pastured lands, when left to nature, must ultimately become exhausted. They must eventually become poorer; but in their case the deterioration will be slower and more distant, and by judicious top-dressings may be still longer protracted.

2. The natural changes which the surface soil undergoes, and especially upon clay lands when laid down to grass, explain why it is so difficult to procure, by means of artificial grasses, a sward equal to that which grows naturally upon old pasture lands. As the soil changes upon our artificial pastures, it becomes better fitted to nourish other species of grass than those which we have sown. These naturally spring up, therefore, and cover the soil. But these intruders are themselves not destined to be permanent possessors of the land. The soil undergoes a further change, and new species again appear upon it. We cannot tell how often different kinds of grass thus succeed each other upon the soil, but we know that the final rich sward which covers a grass field, when it has reached its most valuable condition, is the result of a long series of natural changes which time only can bring about.

The soil of an old pasture field, which has been plowed up, is made to undergo an important change both in texture and chemical constitution, before it is again laid down to grass. The same grasses, therefore, which previously covered it, will no longer flourish, even when they are sown. Hence the unwillingness felt by practical men to plow up their old pastures—but hence, also, the benefit which results from the breaking up of such as are old, worn-out, or covered with unwholesome grasses. When again converted into pasture land, new races appear, and a more nourishing sward is produced.

Systematic Agriculture.

Importance of Farm Accounts.

Editors Cultivator—With a desire to make my subject more attractive to my brother farmers, a few facts have been presented in connexion with the leading and most important implements and machines used in our farming operations—facts which exhibit the advantages we possess at the present day, over those of our predecessors, in a strong light; and it seems to me so conclusive, that no prudent man, with a farm of over one hundred acres, should omit the constant use of them in their proper season.

Figures have been used to show the benefits actually derived by farmers in this region, and though the wages may vary in different localities, in some degree affecting the results; yet among thinking, careful men, who are not disposed to be exorbitant in the payment of wages, the figures and calculations presented, will probably be a guide to safe resolutions. It must not be expected that the farmer who permits stumps and rocks to encumber his grounds, can derive the necessary benefits offered by the use of the Reaper, or Seed Sower, or in short, any farm implement, in the same proportion as the farmer, who by perseverance has cleared his farm of these encumbering and wasteful foes. And it may be useful to repeat that, the very high rate of wages paid in this state and country for agricultural labor, as compared with most other nations, ought and must compel us, to seek for and use every well-made, simple machine that can bring the produce of our fields to yield a profit, in some degree equal to the profits of other professions and trades. This can now be done with the implements before described, if judiciously applied, and it makes good one of the principles with which these suggestions were started, viz:—that the power of a horse is equal to the power of six men, and by combination with farm machinery, this motor, (the horse) is equal to the combined efforts of twelve, or even twenty men in cultivating the earth.

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[*] The permanence of a fine carpeting of rich and sweet grass upon a portion of his farm, is ascribed (by Mr. Purdie) to "the spewings of the worms, apparently immensely numerous, which incessantly act as a rich top-dressing."—*Prize Essays of the Highland Society*, p. 191.

The subject of farm machinery need not be pursued farther, though many excellent implements have not been named,—we may all see and understand that the same principles are applicable to each.

It may be urged as an excuse for adhering to old and sluggish practices and habits, that the expenditure for the improved implements is onerous at the outset; true, but let us remember that *extraordinary* expense must find its *limit* in the value or worth of the object, and the statements made by me in the several communications to "*The Cultivator*," will, it is believed, easily lead to the reasonable estimates of the values desired.

And here we may as well allude to another and vastly important motive for the study of Order, System and Economy, and that is "our *expenses*." Men are very apt to hesitate at the price of a farm implement, but allow *ordinary* expenses to be incurred until the day of settlement, when an uneasy sense of surprise is manifested at the unexpected amount.

This often arises from the too convenient, but too seductive system of having store credits; a system of unintentional extravagance, which is rarely or never checked by the salutary, and I may say indispensable money saving system, of keeping an exact account of receipts and expenditures, from a bushel of grain to the cost of a plow-bolt. An *easy* system, by which we can see and know at any hour, the exact measure of our expenses—and of the results of our labor—by which we can with comfortable assurance encounter an extraordinary expense, or indulge our families in further ordinary comforts, while at other times, we can firmly deny any and every indulgence as our monitor, the "Farm Book," will most certainly indicate any existing necessity. In every vocation of life, we find men who are afraid to examine closely into their business accounts, and neglect them, lest melancholy should oppress them, or that some need for unwelcome change should appear; others feel as if the plow handle and the reins, unfitted the hand and head for the methodical arrangement of this class of facts. To the first it must be observed that a wound most certainly does there exist, needing cure, and *that* cure cannot and will not be effected, but by close searching and probing. To the second, it will be apparent upon reflection, that t is as easy for the hand to record the cost of a plow olt, as to calculate the value of corn when taken to narket. It is idle, therefore, to attempt any excuse, if he object is useful or desirable.

Be assured that it is not the lot of man to be profuse n expenses, and with the best in our land it is a truth, erhaps not agreeable, that, "if we are plentiful at ur table, we must be saving in the stable." How then can we establish a scale of expenditure which shall yield us all proper comforts, and without stint of measure to our stock?—Farm accounts, methodically, simply, and plainly arranged, at least once in every week, will infallibly give to every farmer the reliable truth, be it favorable or unfavorable. It necessarily gives him abiding confidence in his work, or it leads him with certainty to a remedy for an evil, which cannot be hidden from him.

Many may here exclaim, how easy to preach, but how difficult to practice! Not so, and I will endeavor to show that the practice is easier than preaching. Thus: Let the farmer have three books—

1st. A *time book*, in which is noted daily all the work of his farm, and the cost of the labor thereon.

2d. A *diary*, in which he writes, at least once a week, the expenditure and receipts of every kind and nature connected with his farm.

3d. An *account book*, (generally called a leger,) into which he enters on one side all the expenses incurred by any particular crop or object, and on the other, the receipts obtained from such crop or any object.

These entries being carried on once a week, from his diary into his account book.

This simple arrangement will, at any moment, on reference to his account book, exhibit to his eye, the cost of any particular object, of any crop; and at the end of the season, if he arranges the balances of the several accounts in proper order, it will show him the profit or the loss which has attended his labors. Under any circumstances of progress, or even of loss, the man who thus keeps a precise knowledge of his doings, must ever sleep soundly, and be blessed with a contented and happy frame of mind. He can enjoy and give enjoyment from his increasing stores; or, if unpropitious seasons or events beyond his control assail him, he sees the full bearing of his condition, he knows at once, that having done his duty, he can confidently and cheerfully rely, knowing that adversity has its comforts and hopes, leading, under Providence, to greater benefits than are yet evident to his senses.

As a class of men, it may, I think, be asserted, that none are less subject to loss than the farmer; because speculation and trading, do not and ought not ever to interfere with his higher duties; he knows that tilling the earth is the most natural method for obtaining wealth, for it is the natural blessing bestowed by our mother earth, for the care and attention we proffer to her. The returns may be slow, but they are sure, and far more sweet and enduring than the gains of any bargaining or traffic. As a general rule, then, a farmer will always find pleasure and comfort in consulting his farm-books of account; he will inculcate a habit of generous frugality, enriching the mind as well as the purse.

Without pretending to offer the best system of farm accounts, I venture to add the form of books I have seen, and which have been found satisfactory thus far to several Seneca county farmers. One week's work is here carried through the books, and though they may need more explanation, yet it is hoped that sufficient is given to lead all our thinking farmers to a full comprehension of this deeply important system, without which no farmer can possibly know his true condition, nor whether he is dealing justly with himself and his neighbors.

The following forms embrace the whole work done on a farm during one week, from the 11th to the 16th June, and the actual expense for the week is carried in to the diary, is charged to the separate objects and thence posted into the account book. At the end of the season, each account will show to the farmer its true condition, whether it be profitable or losing.

Time, expense, and occupation of persons employed on the Auckness Farm.—1849.

JUNE, 1849.								Rate pr day.	Rate pr mo.	Rate pr yr.	Cost for this week	Monday, June 11.	Tuesday, June 12.	Wednesday, June 13	Thursday, June 14	Friday, June 15.	Saturday, June 16
NAMES.	Mon.	Tu's.	W'd.	Th'r.	Fri.	Sat.	Total	Cents.	$	$							
J. Mahan,........	1	1	1	1	1	1	6	38.16	10 00	120	2 30	Mending road 'till 10 a. m. Weeding Barley.	Attending the Sheep-shearers.	Attending, marking, and trimming the sheep.	Mending the farm road.	Mending the road.	Hoeing corn.
J. Atkins,........	1	1	1	1	1	1	6	34.50	9 00	108	2 07	Weeding Barley.	Hoeing garden.	Hoeing garden.	Mending farm road.	Hoeing corn.	Hoeing corn.
A. Kirkwood,.....	1	1	1	1	1	1	6	30.67	8 00	96	1 84	Weeding Barley.	Attending the shearers.	Attending the sheep.	Mending farm road.	Hoeing corn.	Hoeing corn.
J. Gilbert,........	1	1	1	1	1	1	6	30.67	8 00	96	1 84	Weeding Barley.	Shearing sheep.	Shearing sheep.	Mending farm road.	Mending road.	Hoeing corn.
H. Ormond,......	.....	1	.....	.....	.....	.....	1	$1	......	......	1 00	....	Shearing sheep.				
J. Herbert,.......	.....	1	1	.....	.....	.....	2	$1	......	......	2 00	....	Shearing sheep.	Altering lambs, &c.			
L. Thompson,	1	1	1	1	1	½	5½	38.46	10 00	120	2 12	Preparing sheep pens, &c. &c.	Rolling wool.	Shearing and trimming hoofs.	Hoeing corn with horse hoe.	Hoeing corn with horse hoe.	Hoeing corn.
T. Thompson,....	1	¾	¾	1	¾	1	5¼	31.95	8 33	100	1 66	Preparing pens.	Rolling wool.	Rolling wool.	Choring.	Hoeing corn.	Hoeing corn.
						Days,..	37¾				$14 83						
											Thermom.	52. 70. 62	56. 60. 65	56. 76. 60	70. 84. 74	70. 84. 74	60. 74. 64
											Barom. .	29.6 .. 29.5	29.5 29.5	29.5 29.4	29.3 29.2	29.3 29.3	29.3 29.6
											Weather,	Clear	Cloudy. Rain.	Hazy. Wind.	Hazy. Clear.	Cloudy. Rain.	Cloudy. Clea.

Diary—*Containing the entries of the farm business for one week.*

Charge 1. Roads for repairs this week, as per time book... $2 30
2. Field No. 4—for weeding barley, as per time book, ... 1 15
3. Sheep—for preparing pens, for shearing, rolling the wool, altering lambs, and trimming hoofs, 7 25
4. Indian corn—for hoeing this week,............ 3 54
5. Garden—for hoeing this week,.................. 69

Correct as per time book,..................$14 83

Credit 20. J. Mahan, for one week's work per time book, $2 30
25. J. Atkins, " " 2 07
30. A. Kirkwood, " " 1 84
35. J. Gilbert, " " 1 84
80. Cash paid to shearers, (161 sheep.) 3 00
40. L. Thompson for 1 week's work per time book, 2 12
50. T. Thompson, " " 1 66

As per time book,............................$14 83

80. Cash. *Dr.* to (3.) Sheep.
For 586 pounds of wool at 32 c. per lb.,... $187 52
85. Expenses. *Dr.* to (80.) Cash.
Paid this week for groceries, per bill,....$1 75
Paid for a plow point,.................... 31
One shoe, set on horse "Bob,"......... 10
—— $2 16

The figures preceding the names of the several accounts refer to the page of the account book, where they will severally be found.

Account Book, or Leger—*Exhibiting the farm business for one week, distributed under the proper accounts.*

1849.	*Roads of the Farm.*	folio 1.	
June 16.	Repairs,..		$2 30
1849.	*Field No. 4—Barley.*	folio 2.	
June 16.	Weeding Barley,..................................		$1 15
1849.	*Sheep Account—flock 161.*	folio 3.	
June 16.	Shearing 161 sheep, rolling the wool, altering lambs, &c., &c.		$7 25
	Cash received for 586 lbs. of wool, at 32 c.....		187 52
1849.	*Indian Corn.*	folio 4.	
June 16.	Hoeing corn this week,............................		$3 54
1849.	*Garden.*	folio 5.	
June 16.	Hoeing this week,................................		69
	John Mahan,	folio 20.	
June 16.	For week's work,.................................		$2 30
	James Atkins,	folio 25.	
June 16.	For week's work,.................................		2 07
	A. Kirkwood,	folio 30.	
June 16.	For weeks' work,.................................		1 84
	John Gilbert,	folio 35.	
June 16.	For week's work,.................................		1 84
	L. Thompson,	folio 40.	
June 16.	For week's work,.................................		2 12
	P. Thompson,	folio 50.	
June 16.	For week's work,.................................		1 66
1849.	*Cash Account.*	folio 80.	
June 16.	Received for wool,...............................		187 52
	Paid for sundries,...............................		2 16
	Paid sheep shearers,.............................		3 00
1849.	*Expense Account.*	folio 85.	
June 16.	Paid for Groceries, &c.,.........................		2 16

I fear, Messrs. Editors, that I have made an unreasonable demand upon your columns this month, but considering *Order* and *System* as the life of business, it cannot, perhaps, be too strongly urged or illustrated, and sincerely do I wish that my remarks might provoke some more powerful pen to place these cardinal virtues of the farmer in a stronger light. Agricola. *Seneca County.*

Premium Farm.

The New-York State Agricultural Society awarded the first premium for the best cultivated farm (1848) to Mr. H. T. E. Foster, Lakeland Farm, Seneca county. We take from the *Transactions* of the Society, Mr. F.'s statement in regard to the management of his farm as follows:

Soil and Situation.—Lakeland farm lies on the eastern shore of Seneca Lake, and consists of 230 acres, of which 200 are under cultivation, the remaining 30 being woodland. Sloping gradually to the lake shore, and undulatory in its character, the land has proved itself well adapted to the cultivation of both grain and the grasses.

The soil is a clayey loam, the subsoil being mostly a stiff clay, having a basis of slate rock, which in some parts of the farm, particularly near the lake shore, approximates the surface. Limestone boulders are occasionally found in different parts of the farm, but to no great extent.

The best method of improving the clay loam, of which my farm is composed, I have found to consist in deep plowing and ample manuring, care being taken to have those portions of the fields which needed it, thoroughly drained.

The usual depth of plowing is between six and seven inches, except when fall plowing is done; the furrow is then deepened, that a portion of the subsoil may be acted on by the frosts of winter. The soil being uniform in its character, it is out of my power to answer the remainder of the question relating to it.

I have made no particular experiments in reference to shallow and deep plowing.

The subsoil plow has not yet been introduced upon the farm.

The trees indigenous to the soil were red and white oak, hickory, hard and soft maple, black walnut, butternut, red elm, white and black ash, basswood, mulberry, wild cherry, crab apple, cucumber, aspen and thorn bush. The plants that were indigenous were, as far as I can ascertain, as follows: Ginseng, adder tongue, Adam and Eve, blood root, blackberry, strawberry, elecampane, cowslip, crowfoot, colt's foot, heal-all, pileworth, Solomon's seal, wild turnep, wild gooseberry, mountain mint, wild pea, mandrakes, &c.

Manures.—Twenty loads of manure, (30 bushels to the load,) are usually applied per acre. On some portions of the land where a stiff clay predominates, 30 loads per acre have proved advantageous. The manure is allowed to accumulate in the yards until spring, when it is either applied in a green state, or drawn out and made into a heap, alternating the manure with layers of straw, care being taken to have a trench made at the lower end of the heap, to receive the drainage therefrom: this trench being replenished from time to time, with fresh straw.

The manure is made from the straw of the different grains raised on the farm. With this straw the sheep and cattle yards are kept constantly littered to a good depth, and it is freely used as bedding in the horse and cow stables, the manure thrown from these being frequently covered with straw, to prevent the action of the sun, and retain as much as possible of the ammonia escaping therefrom. The number of loads manufactured annually depends in a great measure on the quantity of straw produced, and also varying with the number of cattle wintered. The whole number of loads drawn from the yards this past season was 400, this number would have been much greater, had not a deficiency of sheep hay rendered necessary the feeding of straw to the sheep for a longer period than has usually been the practice. Hitherto all the manure has been applied the same year it was made.

The manure is used partially in a green, and partially in a fermented state. The land intended for corn and potatoes is always covered with green manure, the surplus is applied in a fermented state to the fallows and stubbles in the fall.

There is a bed of shell marl on the farm lying at the depth of two feet from the surface, which having lately drained, I intend using in the manufacture of compost with my barn-yard manure. I know of no other way, by which my supply of manure could be cheaply increased.

I have used lime, plaster, bone dust and ashes. Six bushels of lime were mixed with four of ashes and two of plaster, and applied at this rate per acre to the potato field. The vines grew with remarkable luxuriance. The yield of potatoes, however, was not great, and the tubers were much affected by the rot, contrary to my expectation, as this compost was applied in the hope of preventing the disease. Plaster is always applied in the spring as a top-dressing for clover and for corn, at the rate of a bushel per acre, always with very marked benefit. The pasture fields also receive a dressing at the same rate. Bone dust has been applied to timothy meadows, at the rate of three bushels per acre, without any visible effect.

Tillage Crops.—One hundred and twenty-two and a-half acres were under tillage this year, as follows:

55 acres of wheat sown last fall; 13 do barley; 14 do oats; 13 do Indian corn; ½ do potatoes; 27 do fallow, now sown with wheat.

I have, in addition, sown with wheat this fall, my oat and barley stubbles.

Two bushels of wheat are sown per acre in September. As but one field on the farm is infested with Canada thistles, or any other noxious weeds, which can be destroyed by fallowing, I have pursued the system of sowing my oat and barley stubbles, in preference to having as large a portion of my farm as is sown with wheat, lying in naked fallow. The crops raised by this method, have proved equal both in quality and quantity to those of my fallows; and as may be easily perceived, the profit is increased by the whole value of the summer crop. My method of stubbling is as follows: As soon as the oats and barley are removed, the land is plowed to a good depth, and immediately harrowed down. The stubble fields are allowed to remain in this state until the fallows are sown, thus giving an opportunity to whatever seeds or fallen grain may have remained on the ground to germinate. They are then cross-plowed, and the wheat sown and harrowed in. This year Ide's cultivator has been used in some of the fields to cover the seed, and from the appearance of the growing crop, successfully. It has been found that stubble fields prepared as has been stated, have been more free from pigeon weed, or red root, (with which most of the farms in this neighborhood are more or less infested,) than the fallows.

Part of my wheat was sown the past season on a clover ley, plowed to a good depth, the wheat sown on the furrow, and then harrowed in. The crop proved most excellent. It may be here remarked, that many farmers in this vicinity have practiced this method of sowing wheat on a clover ley, and with but few exceptions, successfully. The fields which are fallowed, are plowed three times, and thoroughly harrowed after each plowing. The usual time of sowing is from the 20th to the 30th of September. All the grain is cut before it is fully ripe. Hussey's reaping machine is employed in harvesting. Ten men are required to man this machine effectually, and twelve acres per day the usual amount cut, the machine being in operation about eight hours. By having two teams, and changing them every two hours, the number of acres cut, might, I have no doubt, be increased to sixteen per day. After remaining in shock till it is fully ripe, the wheat is carried to the barn where the threshing machine stands. The whole amount harvested from 55 acres, was 1,422 bushels, being at the rate of nearly 26 bushels per acre.

Barley is sown as early as possible in the spring, at the rate of two and a-half bushels per acre. The ground selected for this crop is usually that on which corn has grown the previous season. It is harvested in the same manner as the wheat. The average yield this season was 33 bushels per acre. The oats are usually sown on a clover sod, which has been used as a sheep pasture the previous year. The average yield per acre was 55 bushels. Both the oats and barley, as well as the wheat, exceeded the standard weight. It may be proper to state that the scythe and cradle were used in harvesting those portions of the oat and barley fields where the reaping machine could not be worked to advantage.

Indian corn is planted about the middle of May, in drills 3½ feet apart, Emery's seed planter being used. It is cultivated and hoed twice during the season. Part of the land being ill adapted for corn, the average yield this season is light, being at the rate of 55 bushels of ears per acre.

For the last four years, the potatoes have been affected with what is termed the rot, frequently decaying, although apparently sound when dug, before a month has passed. No remedy has been discovered. Early and late planting and harvesting have both been tried, but without success.

Grass Lands.—Clover and timothy are grown on this farm. Twelve pounds of clover seed, mixed with four quarts of timothy, are sown per acre in the spring, either upon the growing wheat or harrowed in with the barley. Those fields intended for timothy meadows are sown in the fall, with from eight to ten quarts of good seed per acre. Both the timothy and clover seed are sown by hand.

Thirty-five acres were mown this year, the average yield being about a ton and a-half per acre. The manner of making clover hay is as follows: The clover that is cut one day is allowed to remain in the swath till the following morning, when it is turned, and the same afternoon raked with the horse rake, and put into small cocks; the next morning, if the weather is fine, these cocks are opened, and the hay is then carried to the sheds. From four to six quarts of salt are allowed to every load. The time of cutting varies of course with the season, but is generally about the first of July. Timothy hay is cut when the bloom is past, but before it is fully ripe. It is allowed to remain in the swath over night. The following day it is turned, raked into windrows and drawn in, without having been drawn into cocks. Salt is also freely used with this hay.

All the mowing lands can be plowed.

I have not practiced irrigation, as there is no means for so doing.

There is no bog or low land on the farm.

Domestic Animals.—The stock at present on the farm is as follows: seven cows, six young cattle, and four calves, six horses and a yearling colt. The cows and young cattle are a cross of the native breed with the Durham.

I have hitherto made no experiments to test the value of different breeds.

The milch cows during the winter are housed in a building set apart for this purpose, each cow having her separate stall. They are allowed, however, the use of a yard adjoining the stable during part of each day. In this yard there is a trough which is always full of pure water. Morning and evening the cows are fed in the stalls, with corn-stalks and roots, as long as they last, while in the yard they are supplied with fresh straw, placed in racks. When the corn-stalks are all consumed, they are fed with hay. The young cattle are allowed to run in a barn yard, to which a warm shed for their shelter is attached, and are fed with corn stalks and straw till about the middle of February, when hay is substituted for the stalks. The corn stalks for the milch cows are usually cut with a cutting machine, moved by horse power. The young cattle have at all times access to water. The calves are kept in a yard by themselves, and in addition to hay, receive a feed of bran, or of corn and cob meal, daily. The cattle fed in this manner, keep in good condition and stand the winter well.

As most of the butter is consumed on the farm, no very accurate account has been kept of the quantity. There is nothing peculiar in the manner of making it. No cheese is made.

I have at the present time, 175 sheep. They are of the Merino breed, though not of pure blood. The average yield per fleece this season was 3½ pounds. Last year's clip brought 30 cents a pound. The wool of this year's shearing is still unsold. About three-quarters of the ewes have lambs, and usually about four-fifths of these are raised. The sheep will now command from $1.50 to $1.75 per head. The lambs can be sold for $1.

The sheep are wintered in large yards, with sufficient accommodations for shelter, and abundantly supplied with water. The ewes, wethers and lambs have each separate yards. The ewes and wethers are fed with straw, placed in suitable racks, with an occasional feed of bran, until about the first of February, when they receive in addition, a daily allowance of clover hay. The lambs are fed clover hay all through the winter, with a daily feed of oats or corn and cob meal. The past winter I lost but one sheep from the whole flock.

There are now on the farm 11 hogs, 2 breeding sows and 4 pigs, 15 in all. They are fed with fallen apples and the slop from the house until a month or six weeks before killing them, when they are fed as much corn as they will eat, in addition to the slop. They are killed when from 12 to 15 months old, and will average from 250 to 300 pounds when dressed. In the summer, the larger hogs are allowed to run in a clover lot.

No experiments have been made to test the value of different root crops. Turneps were once attempted, but without success. Half an acre of carrots are usually grown for the use of the milch cows, the land, however, being ill-adapted for roots, the yield is seldom large.

Fruit.—There is an orchard of three and a-half acres, in full bearing, containing 120 trees; and I have lately planted another acre with 66 trees. The trees are all grafted, and comprise the following varieties: Early Harvest, Sweet Bough, Fall Pippin, Jersey Sweeting, Baldwin, Spitzenberg, Bellflower, Tallman Sweet, Vandevere, Pearmain, Seek-No-Further, Swaar, Rhode Island Greening, Spice, Winter Pippin, Lady Apple, Northern Spy, and Newtown Pippin.

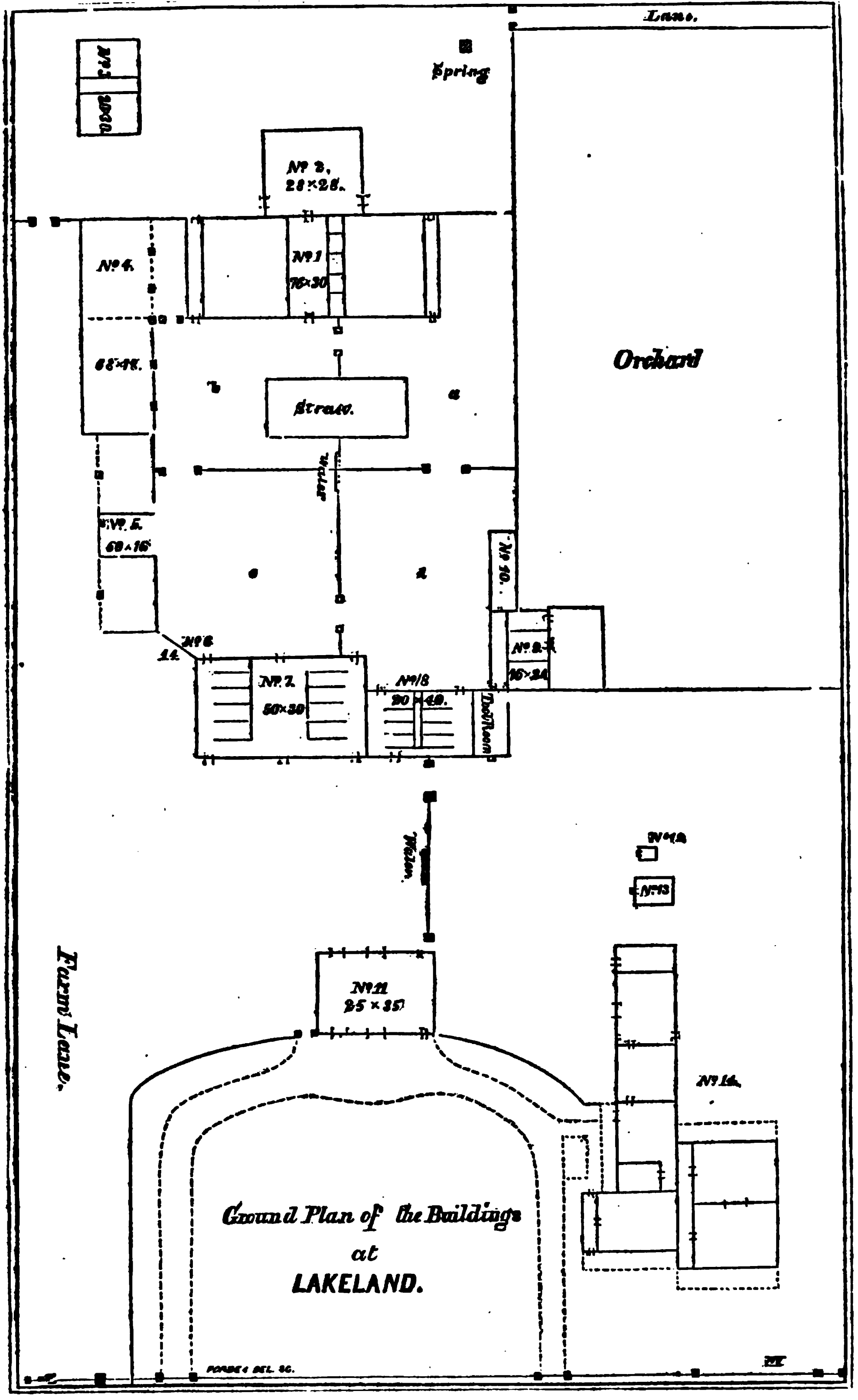
There is a pear orchard of two and a-half acres, lately planted, containing 178 trees of the following varieties: Madeleine, Bartlett, Bergamot, Virgalieu, Seckel, Duchesse d'Angouleme, Louise Bonne de Jersey, Passe Colmar, Winter Nelis, Glout Morceau, Beurre d'Aremberg, &c. The cherry and peach trees are mostly young. The varieties are, of cherries: Napoleon Bigarreau, Elton, Elk-horn, Black Tartarian, Yellow Spanish, Morello, &c.; of peaches, Early York, Early Slocum, Tillotson, Rareripe. There are some fine plums in bearing, and a large number of young trees of approved varieties.

The apple-borer has injured the apple trees to some extent. To prevent its further depredations, I this year caused each tree to be surrounded with clay subsoil to the height of about eighteen inches above the ground, and have noticed but few trees that have been attacked since this was done.

The young orchards are kept always under cultivation, the ground being planted with either corn or potatoes, and well manured. The old orchard is plowed once in three years, receiving a good dressing of manure; one crop taken from it and then seeded down to clover.

No experiments have been made, worthy of note.

Fences, Buildings, &c.—The farm buildings are arranged in the form of a square, enclosing the barn-yard, which, with the exception of a small portion on the



68—PLAN OF LAKELAND FARM.

southern side, is entirely surrounded. The barn-yard, for convenience, is divided into four parts; in the centre is a trough, which waters the farm-yards, and which is supplied from a never-failing spring, situated at a distance from the barn. The spring also furnishes an abundance of water for the house and garden. The situation of the respective buildings will be best understood by the annexed ground plan:

No. 1, is the grain-barn, 72 by 30 feet, with doors at each end, for driving in, but which can be filled with grain, when necessary, from the outside: a space of 16 feet is occupied as a granary, having bins on one side for the reception of different kinds of grain. The threshing machine and straw cutter stand on the floor above the granary, connected with the fanning-mill beneath, and both put in motion by the horse power, which occupies the ground floor of No. 2. The southern end of the barn is built on stone pillars, and is sufficiently high from the ground to afford an excellent shelter for a flock of sheep. No. 2. Building for the horse power; the upper part, which is open to the main barn, being used for grain. No. 3. A small grain-barn 30 feet by 20 feet. No. 4. A shed, the upper part of which is used for hay, and the lower part affording shelter to the cattle; opening to the barn-yard on the south. No. 5. Another shed; the upper part for hay, the lower part being subdivided into three parts, the central division opening on the barn-yard, and the others facing the lane, in which the farm wagons, sleighs, plows and other farm implements are housed. These divisions are of sufficient height to allow of the suspension of a hay-rigging above each wagon, and which can be lowered with facility when required for use. No. 6. Large double doors, connecting with the sheds and horse stable. No. 7. Horse stable, 50 feet by 30 feet, having stalls for ten horses, the space between the two rows of stalls being occupied as a feeding room, in which the hay and straw cutter stands. The upper part of the building is used for hay. The horse-stable is connected by a door with No. 8. The cow stables, with stalls for eight cows, each stall having a hay-rack, and a trough made of brick, for feeding roots, bran, &c. At one end of this same building is a room 12 ft. by 20 feet, which is used as a tool room, in which all the tools are placed at night. Under this room is a warm though well-ventilated cellar for roots. All the upper part of this building is used for hay. No. 9. Hog-pen, with yards attached, the upper floor being used as a hen-house: No. 10. Corn crib: No. 11. Carriage house: No. 12. Ash house: No. 13. Ice house: No. 14. Dwelling house. The wood house, wash room, and the sleeping apartments for the men, being situated in a building which extends back in the rear of the wing: *a.* Sheep yard; *b.* Yard for young cattle; *c.* Sheep yard; *d.* Cow yard; *e.* Sheep yard.

The fences on this farm are of three kinds: Post and board, post and rail, and the common worm fence. The post and board fence, of which there is 505 rods, is built of oak posts and pine and hemlock boards, four and a-half feet high, with a top board and a batten to each post, at an expense of one dollar per rod. Of post and rail fence, there is 276 rods. The posts and rails are both taken from the farm, and at a fair valuation for timber, the expense per panel is about 50 cents. The worm fence is made either in the ordinary manner, or with upright stakes joined at the top with wire. Of this kind of fence there is about 1300 rods. The rails cost from ten to fifteen dollars per thousand.

All the farming operations are conducted with accuracy. All the crops are measured and the results carefully recorded. A journal is kept of each day's work, in which the labor performed by every man is written; and in a book kept for the purpose, is noted the number of days' work bestowed on each field, with the expense of labor, the product from the crop, and the profit from the same.

My books are kept in such a manner, that the expenses of the farm, and the income from it, can be seen at a glance, and an accurate balance of debt and credit can be made at any time. This system I consider not only necessary to an economical management of the farm, but highly satisfactory to the farmer, and will, in my opinion, amply repay him for the time and labor it requires.

The following statement of the expenses and profits of the wheat crop of this year, will serve as an illustration of the manner in which this branch of my accounts is kept.

Preparing of ground.—Men 77½ days, horses, (team) 77½ days,		$81 12
110 bushels seed wheat, at 9s.,		123 75
Harvesting.—Men, 92 days,	$62 87	
Team, 12 days,	9 00	
		71 87
Threshing and cleaning.—Men 62 days,	31 07	
Team 19 days,	14 25	
		45 32
Machine for threshing,		36 40
Board of men, 251½ days, at 25 cents,		62 87
Interest on value of land, 55 acres, at $75 per acre, equal to $4 125 at 7 per cent. is		288 75
Cost of cultivation, including interest,		$710 08
1,420 bushels cost $710 08, equal to 50c. per bushel.		
" " sold at $1 10¾,		$1,572 65
Less, cost, as above,		710 08
Nett profit,		$862 57

N. B. The cost of cultivation, exclusive of interest on value of land, is equal to 29⅝ cents per bushel.

Similar statements could be given, of every crop raised, but the above will suffice.

I have thus answered to the best of my ability, all the questions proposed.

Farm Account—1848.

Dr.—To	labor account,		$628 43	
	House expenses,		313 25	
	Farm expenses,		973 20	
	Amount paid for taxes,		32 07	
	Amount paid for insurance,		75 00	
	Profit and loss account,		1,037 35	
				$3,059 30
Cr.—By	1,420 bushels wheat, at $1.10¾c.,		$1,572 65	
	410 bushels barley at 68 c.,		278 80	
	321 bushels corn, at 50 c.,		160 50	
	768 bushels oats, at 25 c.,		192 00	
	8½ bushels clover seed, at $4,		34 00	
	6 bushels timothy seed, at $2,		12 00	
	62 tons hay, at $5,		310 00	
	15 tons corn stalks, at $3,		45 00	
	24 bushels potatoes, at 25 c.,		6 00	
	75 bushels carrots, at 12½ c.,		9 37	
	30 bushels apples, at 63 c.,		18 90	
	11 hogs, average 230 lbs., at $4,		101 20	
	558 lbs. butter, at 12½ c,		69 75	
	499½ lbs. of wool, at 26 c.,		129 87	
	Eggs,		15 00	
	Pelts sold,		8 21	
	Fire wood,		20 00	
	10 sheep sold,		23 68	
	6 pigs sold,		3 00	
	Increase of stock.			
By	36 lambs, at $1,	$36 00		
	4 pigs, at 50 c.,	2 00		
	4 calves at $3,	12 00		
			50 00	
				$3,059 30

In the account of house and farm expenses are embraced the amount of farm produce consumed, and the actual cash expenditure. H. T. E. Foster.

Plowing by Steam.—Some of the more recent experiments in England, in plowing by *steam*, have proved more successful than formerly, in consequence of using stationary engines at the extremities of the field. The engines are moved by a pair of horses. This mode would be well adapted for drained bogs, where the soil is often so soft, that teams cannot easily travel over a

Obituary.

Death of E. Phinney, Esq.

Editors of the Cultivator—I last week learned the sad fact of the sudden decease of our most estimable and respected friend, E. Phinney, Esq., of Lexington, Mass. In contemplating this unexpected event, I have the compound feeling of deep pensiveness at the great loss the community has sustained, and of exultation on account of the lustre, the bright beneficence, shining forth from his virtuous and industrious life. I think it right that we should pause a little, to consider the great and important influences, radiating from the life and character of our lamented friend, and the secret springs of those influences. Particularly is it right that his example should be held up to the view of every farmer in the land,—for he had not a superior, in all we understand by the terms—a hospitable, highly educated, and yet eminently practical and successful farmer.

Mr. Phinney was born in the year 1780, in Nova Scotia, whither his father had temporarily removed, from the then province of Maine. The family soon removed from thence to Lexington, Mass., upon the farm that our friend afterwards cultivated, till his death. The youthful days of our friend, until the age of seventeen years, were spent upon this farm. He assisted his father in the various labors of husbandry, during the season of seed-time and harvest, and his winters were devoted to the prosecution of his studies, preparatory to entering college. In walking over this farm, a year ago, with our deceased friend, he related, with a smile, many of the rude ancient modes of agriculture, which, while a lad, he assisted his father in performing. Among others, he mentioned, as we came to the now beautiful reclaimed meadow, yielding the most luxuriant crops of the cultivated grasses and grain, that he had toiled many a day with his father up to his knees in mud and water, in carrying off, upon poles, the swamp hay from this meadow, to dry ground.

In the year 1797, he entered Harvard University, at which he graduated, with distinction, in 1801, at the age of twenty-one. Entering immediately after upon the study of law, he came early to the practice of his profession, at Thomaston, in Maine. He afterwards returned to Massachusetts, and attained a high reputation in a long and laborious career at the bar, in the county of Middlesex. In the year 1831, he was appointed the Clerk of the Courts in that county. The duties of the office he discharged for eighteen years, or until the time of his death, with the most patient industry and faithfulness, to the entire acceptance of the court and the community. Indeed, he may truly be said to have met death with his harness buckled on; for he was carried directly from his office to his residence and the couch where he died. But it is my intention to speak more particularly of Mr. Phinney, as a farmer.

Mr. Phinney commenced farming some twenty-five years ago. His farm had been carried on previous to that time, under the rude and improvident methods generally current in those days. The uplands were covered with stones and bushes, and the fields that had been plowed and cropped, were most thoroughly exhausted. The lowlands were either unreclaimed sour meadow, or wild impassable morass. He was persuaded, however, that from the contiguity of the farm to a large market, and the natural freeness and quickness of the soil, an investment might here be made in the removal of obstructions to cultivation, and the improvement of the soil, which, in the end, would be richly remunerative. It was no part of Mr. Phinney's nature to do things 'by the halves;' and his plans for improvement were upon a grand scale. All his prominent operations, however, were entered upon, and perfected with great judgment, and a strict regard to practical utility,—as results have proved. The total income of the farm not exceeding five hundred dollars per annum, for several years, reached nearly as many thousands before his death. His expenses, all the while, were very heavy, for his hospitality was unparalleled and unbounded. Hardly a week occurred, during the year, and at some seasons hardly a day in the week, but his family were entertaining visitors, attracted thither from all quarters of our country, to observe his modes of culture. It is believed that few men were as accomplished, in all that pertains to the gentleman and the hospitable host, as Mr. Phinney.

As a farmer, he brought to bear a most thorough investigation of the principles by which nature is governed in her operations. He never rested content with mere surface knowledge of scientific principles, nor with customs of husbandry, simply as such, but always was in the habit of looking into the interior merits of things. All his operations, in all stages, from the turning of the furrow, to the securing of harvests; from the breeding and rearing, to the full maturity of his agricultural animals, displayed the most thorough investigation of correct principles, by an enlightened and practical mind. I will but barely enumerate some of these operations, as the readers of *The Cultivator* have had an extended description of them in my former notices of his farming.

1. One of the first experiments made by Mr. Phinney, was the one by which he ascertained the amount of purely vegetable matter of the sward in an acre of grass land not yielding more than 500 lbs. of hay. The sward was carefully dug up on a portion of the field in the month of May, the roots and tops carefully separated from the dirt, and weighed; and it was found that an acre of sward land, of this description, contained twelve and a-quarter tons of vegetable matter. He therefore, commenced with, and always continued in, the practice of but one plowing for the whole rotation of crops following. By this means, the vegetable matter of the sod was turned under, there to remain, free from wasting influences by sun and wind, and, by its gradual decay, to keep the land light and permeable, and furnish nourishment to all the crops of that rotation.

2. The extensive manufacture, and correct application of peat and other composts.

3. The thorough under-draining of his bog-meadows and springy soils, thus bringing into profitable cultivation, land before without value.

4. The planting of extensive orchards, of valuable fruits, the rearing and training of the trees, showing the benefits of keeping the soil constantly open by cultivation, and of spreading out the tops or branches by the horizontal method of training, so as to admit the genial influences of light and heat in the perfecting and ripening of the fruit.

5. The scientific crossing, and the care and feeding, of improved breeds of cattle and swine.

However pressing professional duties might be, Mr. Phinney always found time to direct the various and daily business of the farm. To accomplish so much, it was his custom, during the fall and winter months, when his official duties were the most pressing, to rise by four o'clock in the morning, shave himself by the light of his fire, and then draw on a pair of stout boots, and with lantern in hand, sally forth to the barns and piggeries, to inquire into the condition of his numerous animals, and give the workmen the necessary directions for the business of the day. At six o'clock he took his breakfast, and immediately after started for the Court house, eleven miles distant, returning home at night. It was not unusual for him to repeat his visit to the barns in the evening. His friends sometimes remonstrated with him for returning home in very inclement weather; but he always replied, that this kind of exposure and activity fitted him the better for the discharge of official duties, and would never hurt him.

Mr. Phinney was constantly receiving letters from all quarters, making inquiries upon various subjects pertaining to farming, the answers to which would sometimes extend through several sheets of paper. Yet, owing to his love for, and his desire to promote agriculture, together with his perfect system, and untiring industry, he would always take pleasure in *finding* time, by some means or another, (often by sitting up till past midnight,) to answer those inquiries. It is a matter of regret to his friends now, however, that more of his spare or *stolen* time, could not have been devoted to a more public communication of his vast stores of knowledge, through the agricultural Journals, thereby benefiting a far greater number.

As a practical writer upon farming, no man in our country held a higher rank than Mr Phinney. His communications to the *New England Farmer*, and other papers, upon the various modes of culture he had adopted, detail every important particular with the greatest precision and minuteness, and evince the soundest discrimination, the profoundest investigation of correct principle. I here give a few extracts from his published writings, to show his ability in this way. The first quotation indicates the ardor of his mind in his agricultural pursuits:—

" The first sod that was turned, was one of the first decided steps from a savage to a civilized life, and in proportion to his advancement in agriculture and the arts of husbandry, man has, in all ages, receded from barbarism. Compare, for a moment, the miserable condition of the houseless, roaming savage of the forest, clad in the skins of beasts, furious and ungoverned as himself, depending for his subsistence upon the uncertain fruits of the chase, or the spontaneous productions of the earth, with the substantial permanent comforts of the industrious, intelligent and virtuous farmer;—and will not the contrast reconcile the cultivator of the soil, to a cheerful obedience of the divine command, to 'eat his bread in the sweat of his brow?'

" I shall not attempt a labored account of the progress of agriculture, from the earliest ages to the present day. It is enough that we find the opulent, the powerful and the learned of modern, as well as ancient days, devoting their wealth, their influence and their talents, to the advancement of the interests of agriculture. Who, then, is so regardless of the utility, the honor, or the pleasure of cultivating the soil, as not to aspire to the honorable appellation of Farmer? Who does not wish to withdraw from the anxious cares and uncertain pleasures of merchandize, and the perplexing duties of public or professional life, to repose on the tranquil bosom of rural retirement, and taste the pleasures, as well as partake in the labors of rustic life?"

The following extract shows the difficulties to be encountered, and the obstacles to be overcome in cultivating the stern soils of Middlesex county, among the hardest of which was his own farm, in its natural state:

" The deep intervales and alluvial tracts, which abound in some parts of our country, where almost the whole labor of husbandry consists in sowing and reaping, and no farther skill of the farmer is required than to know seed time and harvest, are not to be found in Middlesex. The broken and rugged surface of our farms, made up of hills and valleys of the roughest materials, requires great labor as well as skill to subdue its stubborn qualities, to preserve its natural strength, or to restore its wasted energies. This, while it increases the labor of the husbandman, at the same time gives him health of body and vigor for action, while he is happily exempted from the many evils which attend the cultivator of a more fertile region. This very rough and comparatively barren quality of our soil, though it may sometimes yield but a stinted harvest, and oblige the farmer to rise early, go late to rest, and eat the bread of carefulness, has nevertheless proved an independent, virtuous and happy community of farmers, whose unyielding patriotism and noble deeds of daring have enrolled the yeomanry of Middlesex among the boldest defenders of Grecian or Roman liberties."

Mr. Phinney was among that better class of farmers,—happily, a rapidly increasing class.—who disdain not to draw information touching their profession from books. All his practices were the result of a careful investigation of theoretical principles, derived from extensive agricultural reading, united with the closest and most minute personal observation in the field. One blow of his vigorous pen, demolishes the whole tribe of clamorers against 'Book-farming.' Hear him:—

" Books, I am aware, are a most distrustful source of information among many of my agricultural brethren. This ought not so to be. While the professors and friends of all the other arts and sciences, call *to their* aid the light and accumulated *written* wisdom of the past and present ages, why should the art of cultivating the earth, by far the most important of all the arts, be allowed no other guide than blind tradition?"

Every attentive observer of the actual condition and prospects of farmers around him, sees, that those tillers of the soil who read, observe and think, who make the laws of nature their study, and who appropriate to their own advantage every valuable suggestion of science, are fast distancing their more drudging neighbors. who are bound by the grappling, *withering* power of ignorance and prejudice. Mr. Phinney's remarks are much to the point on this subject:—

" It is true, that the wealth of the opulent has done much, but mental research and a spirit of inquiry. accompanied by the personal inspection and persevering efforts of the practical farmer have done much more, to increase the produce, and improve the condition of our farms. This is most forcibly illustrated by Pliny the elder:—

" 'Furius Cresinus, an emancipated Roman slave, having obtained from his very small estate, much larger crops than his more wealthy neighbors from their vast domains, they became so envious that they charged him with employing enchantment to attract into his grounds the produce of their fields. Having been summoned by Spurius Albinus, and being fearful of condemnation, he introduced into the forum. as the tribes prepared to vote, his robust and well clad family, and his agricultural implements, his heavy mattocks, his ingeniously constructed plows, and his well fed oxen. and then exclaimed—Behold! Roman Citizens, my magic; but I am still unable to show you, or bring into the market place, my *studies*, my constant *vigilance*, my fatiguing labors. Scarcely had he concluded, when he was absolved by public acclamation.'

" It is in enterprise, *study*, *unremitting study*, vigilance and industry, that the mystery of great crops and successful husbandry consists."

It is the glory of our country that we have, scattered along everywhere among its private citizens, individuals,—unknown, perhaps, beyond the limited sphere of a district,—who are competent, both by native endowments and personal attainments. to fill the great and responsible trusts of State. All that shall be wanting is some fitting circumstance to draw the individuals out. and familiarize them with the *details* pertaining to those trusts. We may specify a little. It is the glory of our country, and it will tell, too, upon its future prosperity, that we now have individuals scattered along *in the agricultural profession*, who fully answer this description.

Among these, we may regard our lamented friend, Mr. Phinney, as an eminent example. Fitted for the highest walks of civilized life, he yet found ample scope for the successful employment of his talents and acquirements, in the peaceful and noiseless pursuits of agriculture. And so it ought to be. It is of the first importance to successful farming on the part of the individual, and, hence, to a prosperous agriculture, with its long train of attendant blessings, on the part of the State, that our farmers, generally, should be men of thought and observation,—men of mental culture. The farmer has to do with the great and mysterious operations and principles of nature; all his various steps or processes of cultivation, are closely connected with those principles, and his success, in a high sense, is absolutely dependant upon a knowledge and close observation of them. He finds, that in the cultivation of the earth, there are undiscovered principles enough, to engage the utmost efforts of Science to develope, mysteries enough, to task the most highly cultivated, the most specially endowed mind to unravel.

"The scenes of nature lie open to our view; they solicit our senses, and are adapted to impress themselves in a most lively manner upon our minds. Still, the mysteries of nature, with regard to the *essences* of things, and indeed to a multitude of subtle operations, are kept in a kind of sacred reserve, and elude the utmost efforts of philosophy to *surprise them in their concealments* and bring them to light. While Science goes on from step to step, in the march of her discoveries, it seems as if her grandest result was the conviction how much remains undiscovered; and while nations in a ruder state of science have been ready to repose on their ignorance and error, or to confound familiarity with knowledge, the most enlightened of men have always been the first to perceive and acknowledge the remaining obscurity which hung around them; just as, in the night, the further a light extends, the wider the surrounding sphere of darkness appears. Those that have devoted themselves to an investigation of the laws of nature, find, in a great variety of the most common productions, sufficient to engage their inquiries and employ their faculties: they perceive that the meanest work of God is inexhaustible;—contains secrets which the wisdom of man has not been able to penetrate. They are only some of the superficial appearances and sensible properties with which we are familiar. Substances and essences we cannot reach. The secret laws which regulate the operations of nature, we cannot unveil. Thus, one of the best effects of intellectual cultivativation, and the acquisition of knowledge, is to restore the mind to that state of natural simplicity and surprise in which everything above, beneath, and around us, appears replete with mystery, and excites those emotions of freshness and astonishment, with which the scenes of nature are contemplated during the season of childhood."*

In the year 1837, Mr. Phinney was chosen one of the Trustees of the 'Massachusetts Society for Promoting Agriculture.' This office he held till the time of his death. The various masterly reports of this Society, during this time, were from Mr. Phinney's pen; and it is but fair to presume that the suggestions put forth by him in this capacity, have had much to do in moulding and perfecting the improved modes of culture, now so common in the State. Among other things, it may be stated that the present improved form and light draught of the subsoil plow, as compared with the heavy, cumbrous implements of the kind that were first introduced among us from Europe, may be attributed to the investigations and suggestions of Mr. Phinney. His mind was *always* open to improvements. Although, as before stated, his large and important operations were entered upon and conducted with a strict regard to practical utility and profit, yet, so great was his love for Science, in its application to Agriculture, that he would try, upon a small scale, any experiment, suggested from a respectable source, which seemed to lean towards the development of important principles.

But our friend has set sail upon that vast ocean to the shore of which we, too, are so rapidly tending. His long life, so closely compacted with usefulness to the community, was closed, by a short and severe inflammatory illness, at his residence in Lexington, on the 24th of July last. He had attained his seventieth year, without ever before experiencing any severe sickness. The amiable and interesting family have met with a loss that can never be repaired; but while sorrowing over their bereavement, may a reflection upon his kind and fatherly deportment while among them, the high and noble deeds of his life, and the important influences which they are calculated to impart to Society, cheer them in *their* path of life, and, like him, may they fulfil the course allotted to them by like deeds of beneficence.

The public generally, and the agricultural community particularly, have also experienced a great loss, in the death of one so distinguished for the busy occupation of both pen and hand, in every way that could promote the interests of society. Though dead, yet does our friend, by his illustrious example, emphatically remind us to be up and doing, "while it is called to-day;" to seek the enlightenment and elevation of our fellows, in distinction from a total engrossment in *merely* selfish and paltry pursuits.

> "So live, that when thy summons comes to join
> The innumerable caravan, that moves
> To that mysterious realm, where each shall take
> His chamber in the silent halls of death,
> Thou go not, like the quarry-slave at night,
> Scourged to his dungeon, but sustained and soothed
> By an unfaltering trust, approach thy grave,
> Like one who wraps the drapery of his couch
> About him, and lies down to pleasant dreams."

Brattleboro', Vt., August 15, 1849. F. HOLBROOK.

The Veterinary Department.

Inflammatory Fever.

EDS. CULTIVATOR—My attention having been attracted by several communications in your useful joural, on the diseases of animals, I am induced to offer a few remarks on one of the most fatal diseases of cattle, which may be properly called "sanguineous congestion," or "inflammatory fever."

The primary source of this disease, in my opinion, lies in the too sudden changes from scarcity to rich pastures. Plants vegetating in a warm dry atmosphere, and those growing on elevated lands, contain much nutritive matter; on the contrary, when plants grow luxuriantly or in wet situations, they are not very nutritious. No one can doubt that nutritious food makes rich blood, and if cattle are allowed to eat, *ad libitum*, grasses of good quality, can we wonder that an abundance of blood should be formed which pre-disposes the animal to sanguineous congestion. Other causes may unite themselves with this excess of food, as want of exercise, great dryness of the air with excessive heat These, by taking away the serous (watery) parts of the blood by the skin and lungs, are all causes which have a tendency to induce congestion.

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* Rev. Robert Hall.

It is an error to suppose that the fat animal alone can die of plethora; for there is equal if not greater danger with regard to all cattle which make blood rapidly, if the food is nutritious or too rapidly changed when they are in common store condition, than when they are oppressed with fatness. This disease seldom appears in "house-fed" or lean stock; but those feeding or growing most rapidly are its first victims.

In this disease, congestion may be general or partial; if general, it will be principally confined to the brain, the lungs, or the bowels. The animal in such cases all at once ceases to eat; pauses; appears as if stunned; poises itself upon its tottering legs; the flanks heave rapidly; the eyes are no longer sensible to light; the nose is protruded; it foams at the mouth; frequently totters, stumbles and falls; lastly, a gurgling noise is heard in its throat, and it dies in dreadful convulsions. But when congestion is partial, the disease is less rapid in its course; the animal is dull, depressed, ceases to ruminate; limps first with one leg, then with another; large tumors appear in various parts of the body, which rapidly extend by infiltration over the body; the constituents of the blood separate, and decomposition soon begins in the affected tissues. In some cases the animal dies in less than an hour; others survive several hours, and in a few cases, two or three days pass before the disease arrives at a crisis. In most of these latter cases, the animal recovers.

The treatment of these diseases, in order to be successful, must be conducted with strict reference not only to the stage, but the complications of each case must receive our best attentions. The propriety of having recourse to blood-letting, will be best indicated by the character and number of the pulse. If its tone is weak, accompanied with great depression and rapid loss of strength, the ears and legs being cold, bleeding will not only be useless, but highly destructive; the animal is in a state of collapse, and the most active stimulants, as the carbonate of ammonia, spirits of nitric or sulphuric ether, spirits of turpentine, ginger, &c., with warm clothing and frictions to the cold parts of the body.

Bleeding should only be adopted either as a preventive, or at the very commencement of general congestion. It may then be followed by full doses of epsom salts with ginger. I would advise all breeders, on their losing one animal by this malady, to carefully examine their stock, and on observing any symptom of *indisposition*, to lose no time, but meet it by bleeding, physic, and short feed. ARTH. S. COPEMAN. *Utica, N. Y. July*, 1849.

Docking Lambs.

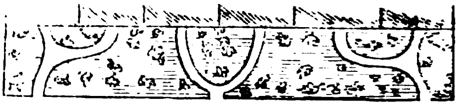
EDS. CULTIVATOR—Under the head of the Veterinary Department, the June number of The Cultivator, I find an article by O. F. M., of Wheeler, Steuben county. He gives his method of docking lambs. He says he takes the tail in his left hand, and holds it out straight, and, with a good shoe knife, cuts it off "as close as suits fancy." He says he finds this method quicker and better than a chisel and block. From my own experience, I think this is the very worst plan that could be adopted. It not only takes much longer to heal, but must be much more painful. Any person who has had any experience in this matter, knows that by pulling the tail hard enough to hold it out straight, and cutting it off with a knife in the manner he describes, will stretch the skin on the tail so much that when it is cut off, it will draw back and leave part of the bone bare; which will make a bad sore, exposed in such a manner that it will cause the little *innocent* much unnecessary suffering. Whereas by placing the tail on a block and drawing the skin close up on the tail, and with a mallet and chisel it is struck off at a blow. Then the skin shoves over the end of the bone, which not only protects the bone but is much sooner healed. A FRIEND OF HUMANITY. *Sullivan Co., N. Y., June 18th*, 1849.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Trees in Cities.

In closely built towns and cities, nothing is more repulsive to the eye, than long ranges of bare blocks occupied as dwellings, standing directly on the street, with none of the glare of reflection softened by the foliage of trees. Many of the better streets in some of our cities have, however, been exceedingly improved in this particular, by a narrow enclosed strip a few feet wide, protected by iron railing in front. A still greater improvement, but rarely adopted, is to build a row of dwellings at a greater distance from the boundary of the street, so as to leave a strip of lawn from twelve to thirty feet in width, to be planted with trees, and kept in the best manner. The accompanying figure represents a row of six houses thus situated. By this arrangement, all of them enjoy separately to a considerable degree, the view of the whole piece of ground; and whatever diminution in the space of the rear may become necessary, would thus be more than compensated by the improvement of the front. As a matter of pecuniary profit, the yearly value of such dwellings would doubtless be much greater in consequence of the slight increased expense of preparing and planting the grounds.



69—TREES IN CITIES.

Raspberries.

The Red Antwerp, and its kindred varieties, the Franconia and Fastolff, do not always succeed on light soils. Indeed it often happens, when the season is very dry, that they do not attain one-third their full size, and inexperienced cultivators are much disappointed, after having heard high recommendations of these celebrated sorts. The difficulty with light soils may be removed in a large degree by deepening the soil, and by a copious application of manure. Such soils should be dug not less than two feet deep, and even a greater depth would be better. Treated in this way, a strong loamy soil will give uniformly fine crops. But where the soil is a quite dry gravel, it may be difficult even, by trenching, to adapt it to the successful growth of the Red Antwerp. The substitution of the American Black Raspberry will be found in such instances a decided advantage. During the late severely dry weather, the latter variety on dry gravel, was observed to be very slightly affected, while some other sorts were rendered wholly unproductive. Although not of large size, the Black Raspberry possesses an unusually high flavor, and a decided improvement is made by enriching cultivation.

Spurious sorts are sometimes introduced in mixture with those which are genuine, by the dropping of the seed, and the production of new varieties on the same ground—which is to be prevented by picking the fruit clean, or by a careful removal of the new seedlings before they have attained much size.

Strawberries for Market.

The following interesting statement of the actual productiveness of some celebrated sorts of strawberry, we copy from the *Genesee Farmer*. This information is the more valuable, as giving the result of a large experiment in a region where the strawberry culture has not as yet been very extensively adopted, and with all the accuracy of real measurement:

"Messrs. BISSELL, HOOKER & SLOANE have also supplied the market largely. In a little over 2 weeks they have sold about two hundred bushels of fruit, notwithstanding the cautions of the 'Board of Health.' Their varieties for marketing were *Hovey's Seedling, Crimson Cone, and Large Early Scarlet*—the latter being their standard sort, according to their experience, by far the most profitable. From a bed measuring 119 rods of ground, they have picked upwards of 109 bushels of this fruit."

NEW SEEDLINGS.—The same paper contains descriptions of 22 new varieties of the strawberry, raised by ELWANGER & BARRY, of Rochester, and selected from about one thousand new seedlings, mostly crosses between Hovey's Seedling and Large Early Scarlet. These descriptions are given in a report of the Fruit Committee of the Genesee Valley Horticultural Society. Having had an opportunity of examining these new seedlings when in full bearing, the writer can add his testimony to their fine quality and extraordinary productiveness. They have now borne two years. New varieties, it is true, are to be received with great caution, but we cannot but believe that some of these may, at least for this latitude, prove eminently valuable. We copy the following descriptions from the report of the committee:—

5. Pistillate, a very large fruit, color a light scarlet, with dark seeds, shape mostly round, very juicy, immense bearer, (108 berries were counted on one root) a first rate berry, thought by some of the committee, the best of the lot.

6. Pistillate, regulary round shaped, much like the last, thought as good a bearer, and as juicy, but not quite so fine flavored.

9. Pistillate, a great bearer, juicy and high-flavored, a deep, bright, glossy scarlet, an excellent table fruit.

11. Pistillate, medium size, very dark scarlet, very juicy, high and somewhat musky flavor, good table fruit, medium bearer.

14. Pistillate, a great bearer, short-necked, high-flavored, very juicy, size above medium, thought the best of all the varieties.

16. Pistillate, flavor much like No. 14.

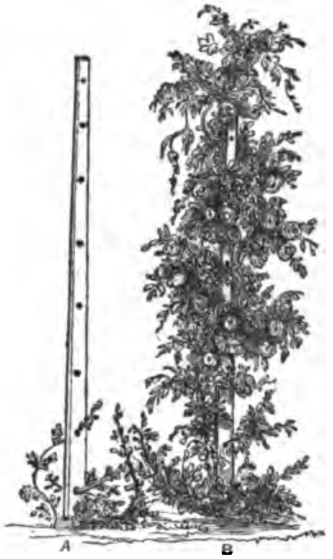
22. Color a beautiful orange scarlet, an excellent table fruit, being tart, very large, and a very good bearer, and valuable for its lateness.

To the report of the committee, P. BARRY, Hort. Editor of the Farmer, appends the following remarks:

From the above collection, Messrs. ELWANGER & BARRY have selected five sorts, which they consider eminently worthy of cultivation, combining large size, fair quality, with extraordinary productiveness.

They have borne for two years, beside the best known varieties, and under the same conditions, and have, so far, surpassed them all in productiveness. They cannot say how they may succeed in other localities, but here Messrs. E. & B. feel confident they will prove valuable.

The following are the names of varieties chosen:—
No. 6, Monroe Scarlet; 11, New Necked Pine; 16, Climax Scarlet, 22, Orange Prolific. ☙



Rose Pillars.

We published a few months since, the description of a mode of supporting climbing plants, on the trunk of a cedar tree, armed with short side branches from bottom to top. We give, in the above figure, another mode of effecting the same object in a more simple manner, which may be advantageously adopted where the cedar supports cannot be obtained, and which, if of durable wood, will last a long time. It is not, however, suited to the more delicate climbers, as these would hardly assume a sufficient breadth of growth; but for roses, bignonias, and the more rampant growers, it is admirably adapted.

It is made of a piece of scantling, set upright like a post, in the earth, and pierced with holes at a distance of about a foot from each other. Through these holes the growing shoots are inserted as they advance upwards in growth, running them in opposite directions through the same hole, and at the same time occasionally twining them around the post, so as to conceal its surface. This mode of support has for some years been adopted by David Thomas, of Aurora, Cayuga county, and from a specimen upon his grounds, the above figure was drawn. The double Prairie, or Michigan roses, the Boursalts, and the taller growing hybrid China roses, are well adapted to these sorts of pillars, and the intermingling of the various shades of color, produces a very pleasing appearance.

The Seckel Pear.

This variety of the pear possesses more than ordinary interest for several reasons. Usually, it is remarkable for withstanding the blight. It is the highest flavored pear known. And so uniform is its excellence in all localities, that the fruit committee of the American Congress of Fruit Growers, *unanimously* pronounced it worthy of general cultivation, a compliment which no other of the thousand pears, except the Bartlett, received. It holds about the same rank with pears, as the Green Gage with plums.

The original tree still stands on the banks of the Delaware, three and a-half miles below Philadelphia. According to Dr. Brincklé, it is about thirty feet high, two feet in diameter within a foot of the ground, and sixteen inches, higher up. It stands in a pasture without protection, and the trunk is hollow and decayed on one side.

Selection of Good Fruits.

We extract the following interesting remarks on fruit culture and selection of varieties, by that experienced New-England cultivator, Samuel Walker, Esq., of Roxbury, now President of the Massachusetts Horticultural Society, from the Report of the American Institute.—*Horticulturist.*

In submitting the following list of the best American varieties of apples, pears, and plums in juxtaposition with the best European varieties, it is not my intention to make any invidious comparison; on trial,—the truth, the whole truth, will be amply sufficient for any purpose. I shall, therefore, leave the result in the hands of the best judges—the cultivators—simply stating that I shall select the best varieties from the catalogues of the New and the Old World.

Apples.

American Varieties.	*European Varieties.*
1 Early Harvest,	1. Early Red Margaret,
2. Williams' Apple,	2. Red Astrachan,
3. Benoni,	3. Sops of Wine,
4. Porter,	4 Gravenstein,
5. Pomme de Neige,	5. Ross Nonpareil,
6. Baldwin,	6 Dutch Mignonne
7. Yellow Belle Fleur,	7. Cornish Gilliflower,
8. Newtown Pippin, (green)	8. Ribston Pippin,
9. Rhode Island Greening,	9. Herefordshire Pearmain,
10. American Golden Russet.	10. English Golden Russet.

I will not carry out the comparisons further, but submit a list of American varieties, all of which are deserving of extensive cultivation, viz:

Large Yellow Bough, Chandler, Fall Harvey, Jonathan, Minister, Hubbardston Nonsuch, Rambo, River, St. Lawrence, (Corse's,) Northern Spy, Esopus Spitzenburgh, Summer Queen, and Ladies' Sweeting.

Pears.

American Varieties	*European Varieties.*
1. Bloodgood,	1. Citron des Carmes,
2. Dearborn's Seedling,	2. Passans du Portugal,
3. Pratt,	3. Williams' Bonchretien,
4. Knight's Seedling,	4. Flemish Beauty,
5. Tyson,	5. Rostiezer,
6. Seckel,	6. Fondante d'Automne,
7. Cushing,	7. Bezi de la Motte,
8. Heathcot,	8. Doyenne Blanc,
9. Andrews,	9. Louise Bonne de Jersey,
10. Buffum,	10. Doyenne Gris,
11. Dix,	11. Beurre Diel,
12. Lawrence,	12. Duchesse d'Angouleme,
13. Columbia.	13. Glout Morceau.

In addition to the above, I will add a list of European varieties of great merit, viz:

Beurre d'Aremberg, Beurre d'Anjou, Beurre Bosc, Eyewood, Henry IV, Van Mons Leon Le Clerc, Marie Louise, Winter Nelis, Paradise d'Automne, Passe Colmar, St. Ghislain, Vicar of Winkfield. Urbaniste, and Echasserie. For baking, Belmont, Black Worcester, Catillac, and Uvedale's St. Germain.

Plums.

American Varieties.	*European Varieties.*
1. Jefferson,	1. Green Gage,
2. Columbia,	2. Purple Gage,
3. Washington.	3. Coe's Golden Drop.

To this lot of plums, I will add the following American varieties as worthy of a place in every good collection, viz:

Purple Favorite, Huling's Superb, Imperial Gage, Lawrence Favorite, Bleecker's Gage, and Bingham.

Cherries.—The best varieties of American and European cherries are very dissimilar. I shall therefore submit a list of such varieties as I consider of the best quality, viz:

American varieties.—Sparhawk's Honey, Downer's Late, Sweet Montmorency, Manning's Mottled, Downing's Red Cheek.

European varieties.—Black Eagle, Black Heart, Black Tartarian, Downton, Knight's Early Black, Bigarreau, Bigarreau Holland, Elton, Florence, Belle de Choisy, May Duke, and the Late Duke.

By the foregoing statement it will be perceived that among the well established apples and plums in this country, a majority are the product of America. Of pears and cherries, the greater number have been imported from Europe.

I will now proceed to the second part of my subject, and notwithstanding my esteemed friend, Thomas Bridgman, Esq., has with ability and good judgment, brought the subject of seedlings under the notice of the managers, yet I shall not refrain to state all I intended to do before I received Mr. Bridgman's able report.

I am aware when a word of caution is to be spoken, or an error pointed out, that it should be done with candor and kindness; in that spirit the following remarks are submitted:

Seedling Fruits.—My object is to point out an error, may I not rather say, a weakness, on the part of some cultivators of fruits, to overrate their own productions, more especially so when they raise a seedling apple, pear, plum, peach or cherry, having any pretension to merit. If their production is of the best quality, and possesses but a single point of superiority, say only a shade of color, or a slight increase of size, in addition to the good qualities of the most choice variety of that class of fruit in the present catalogues, that alone will commend it to other persons, and they will mete out its praise in due season.

No seedling should be recommended for extensive cultivation until it shall have been proved to be *superior in some respects* to the variety it most resembles. For instance, if any person shall raise a seedling plum one-fourth larger, and equal or superior in flavor, more beautiful in its appearance, and more productive than the Green Gage, then the new variety would soon find its way into every good collection of plums. The same remarks will apply to the Newtown Pippin apple. The person who shall be so fortunate as to raise a seedling apple of equal flavor, better color, and a tree more thrifty and productive than the green Newtown Pippin, will have accomplished something *worthy of record and a name.* But cultivators, like young fond mothers, are apt to consider their production to be a "non-such;" time, alas! often convinces them of their mistake; and when too late, they find they have only deceived themselves.

Raising Fruit in Russia.

In the intensely cold climate of St. Petersburg, where nearly all our common fruit trees perish under ordinary circumstances, fine crops of apples, plums, and cherries have been obtained, by training the branches on a trellis only about a foot from the ground. The heavy snows entirely cover them, and completely protect them. Large crops of apples have thus been obtained for successive years, even after winters which have destroyed other trees when double matted. The Green Gage and Orleans plum have ripened before mid-autumn. Morello cherries have borne good crops. When the fruit ripens, it does not bruise in falling.

Mulching.

This excellent mode of treating newly transplanted trees, has been found eminently beneficial during the present very dry summer. A row of young apple trees had been set on a piece of ground, where cultivation could not easily be given. In the early part of summer, they entirely ceased growing, and on a large portion the foliage began to assume a yellow appearance, and their loss was strongly apprehended. Coarse litter was then applied to them, to a depth of several inches and extending some feet about them. So beneficial has been the result, in retaining the moisture of the soil, that although several weeks have elapsed since with scarcely a single shower during this whole period, that they nearly all have commenced re-growing, and the leaves have regained the usual green color.

Planting Strawberries.

As a general rule, the spring of the year has been found much the best season for planting out beds of the strawberry. But it often becomes necessary to perform the operation during summer, or early in autumn. If, at this season, the weather should prove quite dry, a regular and abundant watering for several days does not always prevent the loss of a considerable portion of the plants. To obviate this difficulty, the writer has adopted the following very simple treatment, which has been quite successful even at midsummer, and in the midst of the recent extraordinary drouth. Nearly all the leaves are pinched off from the plants, except the central and half developed ones; the roots are dipped in a vessel of soft mud, giving them a thick coating; when set out, the earth is well settled about them by means of a copious watering; and then about two inches of rotted manure spread upon the surface. This will keep the soil sufficiently moist with one daily watering, if the weather be very dry, and much less frequently if it be moist.

Rawle's Jannett.

Having noticed a great many communications recently, about the Rawle's Jannett apple, I will mention a fact that may be of benefit to the growers of that superior fruit. A friend who has a large orchard of this apple, has ten trees upon one corner of the orchard which always produce fruit a third larger, and the flavor so much superior, that it was supposed by all who saw and ate the apple, that they were a superior variety of the Jannett. This spring I examined the soil, and found that a vein of iron ore passed just under the ten trees, so near the surface that it had been plowed and worked up with the top soil. A variety of the large Blue plum growing upon the same ground, is also very fine; while grafts taken from the same plum trees and worked upon stocks grown on different soil, proves worthless. H. R. Robey. *Hopewell Nurseries, near Fredericksburg, Va.*

Aphides and Ants.

Eds. Cultivator—Having transplanted during the past winter, an orchard of the most select varieties of fruit trees, I discover that at the present time they are infested by thousands of small red and black ants. Already they have completely destroyed an ornamental yard tree, (the Magnolia glauca,) whether by their own depredations, or that of the aphides conveyed thither by them, I am at a loss to determine. Fearing that the same effect will be produced on the trees above noticed, and having tried all the remedies mentioned in various vols. of *The Cultivator*, as well as those obtained from acquaintances, without success; such as the application of lime and ashes to the roots, soot to the leaves, and tar around the trunks, I would respectfully request that you, or any of your numerous contributors who may be in possession of a remedy for this evil, will make it public.

I find that while the apple, pear and plum are comparatively free from ants, the cherry, apricot, nectarine and peach, (particularly the last) are peculiarly liable to their attacks. Thomas C. Hines. *Nansemond, Va., June* 24, 1849.

We are not aware that fruit trees are injured by ants, neither have we known ants to convey aphides to trees. The sweet substance called "honey-dew," exuded by aphides, is eaten by ants; and to obtain this, they frequent those parts of plants where the aphides are lodged. To destroy aphides, syringe the trees or plants with tobacco-water, or strong soap-suds.—Eds.

Horticultural Items.

Strawberry Culture.—The *Farmer & Mechanic* gives the result of the experiments of C. H. Starr, of Groton, Ct., on half an acre of moist loam, manured 10 cords with equal parts of sea weed and fish manure. Plants of Hovey's Seedling, fertilized with staminates, in rows three feet apart, and 18 inches in the drill, set in the spring, yielded the second year 2000 quarts, some of the berries being 4½ inches in circumference. The expenses were, 10 cords manure, 20 dollars; 5000 plants, 10 dollars; labor the first year, 50 dollars; the three succeeding years, 80 dollars each; total for four years, 320 dollars. The profits would be 25 bushels of beets between the rows the first year, 10 dollars; 6,000 quarts strawberries the three succeeding years, at 12 cts., 720 dollars. Nett profit on half an acre for four years, 410 dollars, or 102 dollars per year. The experiment, however, appears to have extended to the first year of fruiting only, and the expenses might, doubtless, have been much lessened by horse cultivation.

Influence of Manure on Roots.—Hoare, in his Treatise on the Vine, states that a bone was placed in a vine border, surrounded by dry clay. The vine sent a root directly through the clay to the bone. In its passage it threw out no fibres, but when it reached the bone, which was rich in fertilizing material, it sent out minute ramifications, and by degrees entirely covered it.

Hardiness of Sweet Apple Trees.—In Wisconsin, where the thermometer not unfrequently sinks to 15° or 20° below zero, and where the fertility of the soil induces a very rapid growth in summer, the tenderer fruit trees are often severely injured in winter. A correspondent of the Prairie Farmer states that *sweet* apples are, for the most part, more hardy than acid ones, and better adapted to very severe climates. Out of one hundred and fifty varieties, twenty-two were sweet apples; of the latter, eleven proved themselves more hardy than any other eleven in the whole list, and only three of the sweet apples appeared to be tender.

Diffusion of Seeds.—In boring for water at a spot near Kingston-on-Thames, some earth was brought up from a depth of three hundred and sixty feet. This was carefully covered with a hand-glass, to prevent the possibility of any seeds being deposited on it, yet in a short time plants vegetated from it.

THE DEPARTED.

BY SIDNEY DYER.

How sad to return to the home where, light hearted,
We mingled in pleasures of friendship each year,
And find from its halls those stars have departed
Who once were the light and the life of its sphere.

Their forms only granted awhile as a token
Of love from their Maker, are doomed to decay;
Like cloud-wreaths at ev'ning which rude winds have broken,
Their vision-like beauty soon faded away.

We hung on their lips as they gave their last greeting,
And bade them adieu with a tear-moistened eye;
And sorrowed to think it would be our last meeting
'Till we pass to their own starry home in the sky.

Tho' we hear not their songs, and beneath their light fingers
The chords of the harp may ne'er thrill to their strain,
Yet deep in the memory a melody lingers,
And in its sweet echoes we hear them again!

Farewell, dearest friends! ye have left us benighted,
Alone in the world our sad loss to deplore,
And think on the days when we lingered delighted,
To hear those loved voices that greet us no more!

Yet why should we mourn them though parted in sorrow,
Or at the just judgments of heaven complain?
But wait for the dawning of that promised morrow—
In bliss we shall meet them to part ne'er again!

Louisville Journal

The Poultry Yard.

The Swan.

The family of Swans, (*Cygnina,*) embraces nine known species; viz., 1. The Mute Swan, (*Cygnus olor ;*) 2. Polish Swan, (*C. immutabilis ;*) 3. Bewick Swan, (*C. bewickii ;*) 4. Hooper, or Whistling Swan, (*C. musicus* of Bechstein;) 5. American Swan. (*C. americanus ;*) 6. Trumpeter Swan, (*C. buccinator ;*) 7. South American Swan (*C. anatoides ;*) 8. Black-necked Swan, (*C. nigricollis ;*) 9. Black Swan, (*C. atratus.*) Of these, the four first-named are reckoned as belonging to Europe and Asia, the fifth and sixth to North America, the seventh and eighth to South America, and the ninth to New Holland.

Our cut represents the Mute swan, usually called in Europe, the domestic swan. The majestic and graceful movements of this bird have been admired from the earliest times. In England it is said to be a "Royal bird, in which no subject can have property when at large in a public river or creek, except by grant from the crown." This species has been imported to America, and is occasionally found as an ornament to the grounds of gentlemen of taste.

71—MUTE SWAN.

The male and female mate in pairs. The female lays from five to seven eggs, and the period of incubation is six weeks. The young are called cygnets. They are at first clothed with greyish brown down, and they do not become entirely white till they are three years old. The bird is very long-lived—instances being known of its having lived more than a century. Its natural food is aquatic plants, but it readily eats any kind of grain.

There are other species of swans which appear to be susceptible of partial domestication. Martin states that the Hooper, as well as the Polish swan will breed in confinement, with access to a pond or sheet of water. This is true, also, of our American swan, which in several instances has been known to breed in a state of captivity. It is a noble bird, nearly as large as the mute swan, but is inferior to the latter in gracefulness and beauty.

The flesh of young swans is of good quality. Formerly it was held in great estimation. We learn that it is still served up in Europe, on occasions of public banquets. But swans are kept chiefly as ornament,—not for food.

The Canada Goose.

Closely allied to the swans, are some species usually included in the *Anserine* or Goose family. The Canadian, or American wild goose, (*Anser canadensis,*) and the Chinese goose, (*A. cygnoides,*) occupy, as a writer observes, "a sort of debateable ground," so that naturalists have been in doubt as to which family they should be referred; and hence some have applied to them the name of swan-geese.

The Canadian goose is extensively known. It is a migratory bird, and in its semi-annual journeys, traverses the northern part of the continent almost from the equator to the pole; and there are but few of the inhabitants of this country that are not familiar with its shrill and animating cry. Its autumnal flight lasts from the middle of August to the middle of October, and the vernal flight from the middle of April to the middle of May. Various stops are made, however, at convenient points, between the winter and summer localities.

It breeds in its wild state, only at the north. Its favorite resort is the coast of Labrador, and the region about Hudson's Bay; though Hearne speaks of having seen great numbers within the Arctic circle, pushing their way still northward.

To the inhabitants of the regions where it breeds, the bird is regarded as an important source of subsistence. Its arrival in spring is anxiously looked for, and the Indians denominate the month the goose moon. It is said that the carcasses of these birds are dealt out as rations to the men employed by the Hudson's Bay Company. "One goose, which when fat weighs about nine pounds, is the daily ration to one of the Company's servants during the season, and is reckoned equivalent to two snow-geese, (*A. hyperborea,*) or three ducks, or eight pounds of buffalo and moose meat, or two pounds of pemmican, or a pint of maize and four ounces of suet." [*Richardson.*] Those which are killed after the weather becomes cool in the fall, are frozen and kept in the feathers for a winter stock of provisions.

72—CANADIAN GOOSE.

Richardson describes the habits of these geese in his *Fauna Boreali-Americana*, as follows:

"About three weeks after their first appearance, the Canada geese disperse in pairs through the country, between the 50th and 67th parallels, to breed, retiring at the same time from the shores of Hudson's Bay. In July, after the young birds are hatched, the parents moult, and vast numbers are killed in the rivers and lakes, when from the loss of their quill-feathers, they are unable to fly. When chased by a canoe, and obliged to dive frequently, they soon become fatigued, and make for the shore with the intention of hiding themselves, but as they are not fleet, they fall an easy prey to their pursuers. In autumn they again assemble in flocks on the shores of Hudson's Bay, for three weeks or a month previous to their departure southwards."

The Canada goose has been domesticated and is not an uncommon inhabitant of the poultry-yard, either in this country or in England. It does not breed till it is three years old. It is somewhat larger than the common goose, and its flesh is better; it has also more feathers and of better quality. It is very hardy, and rears its young with much certainty. It is believed to be quite as profitable as the common kind; and considering its beauty and usefulness, it would seem desirable that it should be multiplied in a domestic state.

The Canada goose will breed with the common, and also with the Chinese goose,—but the hybrid offspring are in all cases, incapable of procreation. Some poultry-men, however, make it an object to breed mongrels, as they are called. They grow rapidly, and acquire a larger size than either of their parents, and their flesh is of so fine a flavor, and so highly prized, that it readily commands a higher price in the market. The finest mongrels are produced between the wild and the Bremen, and the wild and the Chinese geese.

It is stated on the authority of Buffon, that the Canadian goose, kept in a domestic state in France, was found to interbreed familiarly with the swans. Have any attempts been made to cause this goose to breed with the American swan, and with what success?

It may be remarked that the wild goose (*A. palustris*) of Europe, is the parent of our common domestic goose, and of course a distinct species from the Canadian goose.

The Farmer's Note-Book.

The Farmer's Wife.

Eds. Cultivator—Be good enough to insert the following article from the *Springfield Republican*, and the remarks I have thereto appended, in your pages.

'The life of the farmer is so often made the subject of complimentary remark, so often praised for its peacefulness and independence, that the farmer's wife might very rationally be supposed to be the happiest woman in the world. From her relation to the "lords of the soil," she should be the lady of the soil, a peaceful, healthy, independent woman. That the reverse of this is the general fact, will be universally conceded by the wives of the farmers.

'A young farmer arrives at an age when he thinks it time for him to get married and "settle down." He has had a respectable education, and wants a woman who is his equal. He looks about him, and makes his choice. She is a girl bred beside him in the country, has been well educated; reared by careful parents, and is in the truest sense, a lady. She loves books, possesses skill and taste in music, and is in all points fitted to reign the queen of a happy home. She becomes the wife of the farmer, is ambitious to do as much as her neighbors, and her husband is soon avaricious enough to allow the woman of his love to become his most devoted drudge. From thenceforth her life is one of the most unremitting toil. It is nothing but mend and botch, cook and bake, wash and iron, churn and make cheese, pick up chips and draw water, bear children and nurse them. The family enlarges, the husband grows wealthy, becomes important in community, rides to town every day, takes his ease when he chooses;—but the cares of his faded and broken down wife know no relaxation. She may outlive her husband; but rarely does, and not unfrequently a second wife comes in to share in the money that should have been enjoyed by her predecessor, through a quiet old age of rest.

'This is no fancy sketch. It is drawn from life, and in every country-town and neighborhood, its truthfulness will be recognized. Now we despise the good-for-nothings of fashionable life as much as any one, and have no affection for drones in any hive. We are aware that circumstances sometimes demand extreme labor of the farmer's wife, but in New England those circumstances do not prevail, and while we would leave no woman to eat the bread of idleness, we would see the class of which we are speaking released from that circle of everlasting drudgery which deprives them of the privilege of relaxation for a day, and the time which they would gladly devote to the maternal education of their children.

'From this life, the girls of our day are learning to shrink; not because they are lazy, but because they know that they are to be sacrificed. Not because the calling of the farmer is not respectable, but because they do not wish to become his mistress, maid-of-all-work, nurse and boot-jack. Now the foundation of all this wrong is in that avaricious spirit, handed down from father to son, which makes the dollar the standard of respectability, and land the only fountain of happiness. We hope to see the day when the farmer's wife shall share in the peacefulness and independence of the farmer's lot, and we call upon the ladies to engage in the reform themselves, and to teach the lords of the soil that there is something to live for besides potatoes, and that life can be enjoyed more truly by a proper preservation of the health, beauty, accomplishments and good spirits of their companions.'

The writer of the above, pronounces it "no fancy sketch." I will not undertake to say how far the "fancy" was drawn on for the ground-work of the "sketch;" like many of the "tales" of the present day, it may be "*founded* on fact;" but at the same time, I am confident is not a fair representation of the condition of the people to whom it ostensibly refers. It is not, to be sure, improbable that a New-England girl may have had the misfortune to be united to a man who is "avaricious enough to allow her to become his most devoted drudge,"—he may have grown wealthy, and become "important in the community,"—may "ride to town every day, and take his ease when he chooses;" while she, broken down by toil and care, may have met a premature death—a calamity by which "a second wife comes in to share the *money* that should have been enjoyed by her predecessor!"

Such cases should, certainly, excite commiseration for the wife and censure for the husband, though it is most likely his culpability has arisen rather from thoughtlessness than "avariciousness." But the preservation of his wife's health, the alleviation of her burdens, and the advancement of her happiness, should have been his constant aim; and if he has neglected or overlooked these, he has not duly regarded the injunction of the Apostle—"So ought men to love their wives, as their own bodies."

But it would be wrong to suppose that farming in New England is so lucrative a business that those who follow it generally get *rich*, or that the most thrifty among them spend much time in riding to town and taking their ease; and it would be an unjust imputation on the character of our farmers, to suppose that, as a class, they cherish the boorish disposition that would degrade a wife to "maid-of-all-work, nurse and boot-jack," or that they are generally influenced by "that avaricious spirit which makes the dollar the standard of respectability, and land the only fountain of happiness." Hence the "sketch," except, perhaps, as an *individual* description, is untruthful.

That the wives of New England farmers have their trials, ("hardships," if you please,) in common with woman in general, is admitted; but that their lot is *comparatively* hard, I think is disproved by a careful survey of rural life in *general*. In support of this position, I might institute parallels in reference to different sections or countries, but remembering that comparisons are sometimes "odious," I forbear.

The circumstances in which New England women are placed, are in some respects peculiar. It is often remarked that the greatest trouble experienced in conducting farm operations in this section, is the difficulty of obtaining female labor. This arises from the existence of numerous manufactories, where many females find ready employ at good wages. The consequence is that most of that class who "go out to work," go to the "factories," leaving but few to be obtained for the performance of ordinary "house-work."

Thus it is seen that "circumstances" *do* "prevail" in New England, by which the management of domestic affairs, necessarily devolves in a great degree on the mistress of the family and her daughters. To counterbalance this, there are many advantages. Great pains are generally taken to lessen and lighten female labor. In the construction of houses, and in all the internal arrangements and fixtures, the important principles of convenience and *labor-saving*, are kept prominently in view. Water, for all purposes, is commonly brought into the house, and in many instances, into all the apartments where it is wanted. The value of this item, can, perhaps, be best appreciated by those who have known something of the labor of "toting" water, sometimes a distance of many rods, up steep ravines or hill-sides. Fuel is generally secured in a dry condition, in a building attached to the dwelling, where it can be reached at all times, without exposure. In the culinary department, there are all the improvements in economising labor, which Yankee ingenuity has been able to devise. In all operations requiring the greatest outlay of strength,—such as washing, ironing, churning, butter-working, cheese-making, &c.,—there are machines and apparatus which in some instances entirely supercede the use of hand-labor, and in others reduce it to a small amount.

Of the facilities enjoyed in New England, for education and the cultivation of the mind, I have no occasion to speak, at present; they are sufficiently indicated by the accomplishments which the writer in the *Republican* attributes to the farmer's wife. Observer. *Hartford county, Ct., August,* 1849.

Circular from the Patent Office.

We are pleased to receive the following circular, issued by the Commissioner of Patents. The inquiries are directed to the most important subjects, and are so framed as to elicit the principal facts relating to each. If properly responded to, as we trust they will be, they will bring out a mass of valuable information in regard to the agricultural resources of the different sections of our country:—

The Commissioner of Patents, *in execution of acts of Congress, desires to procure information from Planters, Farmers, and others, on the following and any other points that may occur to you, connected with agriculture:*

Wheat.—Your experience as to varieties, difference in weight, and of time in ripening; enemies and diseases, soil and manures best adapted to.

Oats.—What varieties have you tried, and with what results, particularly as to time of ripening; with their estimated value as compared with corn as food; is the cultivation of the oat becoming more or less popular, and for what reason?

Rye.—Have you knowledge of any new and valuable variety; to what use is it applied; have crops diminished of late years, without any apparently corresponding diminution in the fertility of the soil, and to what influence is it supposed to be attributed?

Barley.—Have any new varieties been tried, and with what results; to what uses is this grain applied in your State; if not cultivated, is it forbidden by your soil and climate?

Maize, (Indian Corn.)—What varieties most esteemed, and for what reasons; what the difference in time of ripening; is it liable to change of character and climate, and other influences, and your observations on that point; give the estimated value of the husk as compared with the blade, and of both as compared with good hay, weight for weight; what is the value of green corn for soiling cattle, and especially for producing milk; your experience as to feeding grain, whole or ground, cooked or raw?

Rice.—Variety cultivated; describe any new and valuable process for its cultivation or preparation for market.

(Note.)—As to all these grains, please state the cost of production and usual weight, and the probable average per acre and actual aggregate product, if known, of each in your State; whether the average product per acre has increased or diminished; whether the weight per bushel of the various grains is fixed by law in your State; and what weight is prescribed for each.

Hay.—State the comparative value, as food for stock, of clover timothy, and mixed hay; the grass seeds preferred in laying down meadows; the average yield per per acre; describe any new process in curing; have meadows been irrigated in your State, and with what effect?

Peas.—For what purpose cultivated in your State; for food, or for improving the soil; estimated value as food for stock, compared with Indian corn; the most esteemed variety for field culture; average product per acre; value of haulm or vines compared with other fodder; average price per bushel in the last year.

Root Crops.—Irish and sweet potatoes, turneps, carrots, beets, mangel-wurtzel, artichoke, and other varieties; comparative value; cost of production; weight per bushel; and the average per acre, and aggregate produce for your State.

Cotton.—Average yield per acre and per hand in your State; aggregate yield of the whole State for 1849; describe new varieties and processes of cultivation; manures best adapted to; cost, per pound or bale, of production; freight, charges, commissions, &c., paid by the planter.

Sugar.—Whether of cane or maple; the product per acre; describe any new process of cultivation or manufacture; variety of cane cultivated; its enemies and diseases; cost of making sugar; freight, charges, commissions, &c., paid by the planter.

Hemp.—On this head give any information that you may deem valuable and new as to varieties, processes of cultivation and preparation for market; soil and manures best adapted to; cost of production.

Butter.—Quantity made in your State; average annual produce per cow; are cellars or spring-houses preferred?

Cheese.—Same questions.

Horses and Mules.—Number raised in your State; average value of each; comparative value for farming purposes; where is your market for them?

Number of Horned Cattle in your State; average value of at three years old; where driven to market, cost of keep per head per year; which of the improved races is preferred?

Sheep Husbandry.—What the prevailing races; what the condition of this branch of industry; amount of wool clipped in the year, and average weight of fleece of different races; cost of keeping sheep through the year per head; where your markets; what your system of selling; have you wool depots, and are they found advantageous for wool grower and manufacturer; what number killed by dogs in your State?

Hogs.—Average weight at a given age; average weight consumed per head; proportion of live to nett weight, and cost of production per pound.

Rain.—Time and degree of highest and lowest range of thermometer, and the mean temperature of the year;

also, inches of rain water in each month, and aggregate for the year.

Labor.—Cost of, with and without boarding, and cost of boarding.

Tar and Turpentine.—Quantity and value of, produced per hand.

Plaster and other **Fertilizers.**

Lime.—If used as an improver in your State, how much is thought to be best per acre, and how often applied?

Orchards: *fruits, transplanting of trees, &c.*—Information on these and kindred matters will be of universal interest.

On the cultivation of the **Vine**, on **Grapes**, and **American Wines**, communications are particularly solicited.

P. S. Please answer this as soon as convenient after you procure the information, and before the 1st of December; and, in the mean time, please name any one to whom this circular may be sent in the hope of fuller information. If not room on the circular, please reply on a separate paper, referring distinctly to the queries.

Phosphate and Carbonate of Lime.

The favorable effects of phosphate and carbonate of lime on vegetation, have been shown in repeated instances; and it has been considered important to ascertain by what means these substances find their way into vegetables. M. Lassaigne, a French writer, has published the details of some interesting experiments made by him in reference to this point, a translation of which we find in the London *Farmer's Magazine*. The experimenter directed his investigations to the following inquiries:

1st. If phosphate of lime, such as is found in bones, can be dissolved in water containing carbonic acid.

2nd. In what quantity it can be so dissolved.

3rd. If this solution can or cannot favor the germination and vegetation of cereals.

4th. Lastly, if in different parts of the fully grown plant, we could detect a certain quantity of this same phosphate.

First Experiment.—*The phosphate of lime, (as found in bones) is soluble in water saturated with carbonic acid, at ordinary pressure and temperature.* This proposition, which we have deduced from experiments, has been by Dumar and Gasparin asserted without proof experimental. It is in this state of things that in 1846 we announced to the academy of sciences, that water saturated with carbonic acid, at the temperature of 50°, and at the mean pressure of the atmosphere, dissolves of the phosphate of lime of bones 75-10000 parts, or 1-1333 part of its weight. We stated this solution is decomposed by heat, and that the phosphate is also thrown down by adding potash or ammonia to the solution, so as to saturate the carbonic acid. We also found that water containing carbonate of lime in solution by carbonic acid had, likewise, the power of dissolving small quantities of the bone phosphate. After settling these points we tried several experiments on fresh bones, and on bones which had lain in the earth for some time. The result is, that the latter, when reduced to the size of a nut, and brought into contact with water saturated with carbonic acid, yielded at the end of eight or ten hours, a certain quantity of the inorganic bases, that is to say, of the carbonate and phosphate of lime. This quantity we find to be increased by reducing the bones to powder. An experiment to ascertain the relative proportion in which the phosphate and carbonate of lime are dissolved gave results differing but little from those obtained by Berzelius. Our results may therefore be considered to have established the fact that the salts of lime of the same chemical composition as bones, after being allowed to decompose for some time in the soil, can be dissolved in rain water in consequence of the carbonic acid it contains in solution.

Second Experiment.—The preceding experiments naturally lead us to inquire what effect this solution of phosphate and carbonate of lime could produce on vegetation. Before studying this question, which is interesting both in an agricultural and physiological view, we thought it advisable to place ourselves in the most favorable situation to answer it correctly.

1st. We sowed four grains of wheat in two glass vessels of the capacity of about 25 cubic inches, each containing about 4,000 grains (?) of sand, purified by washing with muriatic acid. Each vessel was watered so as to render the sand moist, the one with *water containing carbonic acid alone*, and the other with *the same water also holding in solution* the phosphate and carbonate of lime.

2nd. The two vessels were then placed on a porcelain plate, and covered with a large bell glass, in order to preserve them from contact with any dust floating in the air. This apparatus was so placed on a wooden stand that it might be placed in the sunshine; the temperature of the room kept as nearly as possible at the 50°. The wheat all vegetated in ten days, the plumule was developed as usual, and gave two leaves to each plant, of the most beautiful green color. After this the development of the two sets of plants were as follows: The growth of the grains of wheat watered with a solution of carbonic acid, and phosphate and carbonate of lime, was much more rapid than those watered with the solution of carbonic acid alone: the leaves furnished by the former grains were generally larger, stronger, and of a deeper green. But 25 days after germination, the vegetation of the plants, placed in such abnormal conditions, languished, the leaves assumed a yellow color at their extremity, and this alteration was gradually propagated through the whole plant. At this epoch, the height of the leaves produced by plants watered by carbonic acid alone was from 2¼ to 2¾ inches in height, whilst the leaves produced by the grains grown in the sand watered with the solution of bone earth were from three to four inches high. The plants were drawn out of the sand as soon as ever they appeared to lose their vigor, and after being well washed with water, they were dried to ascertain the quantity of dry matter they contained. The leaves grown with the solution of bone-earth contained 0.193 grammes, while those from the other experiment contained only 0.153 grammes of dry matter. Thus giving, in both cases, the advantage to the experiment with the bone-earth.

Third Experiment.—The results of this agreed with the preceding. The vegetation caused by the solution of bone-earth again exceeded that caused by the carbonic acid alone, in the proportion of 12 to 8. The development of the roots of each lot of plants, was also in the same proportion. It was not sufficient to have shown by these direct experiments the stimulating effect of the solution of phosphate and carbonate of lime: it was also requisite to ascertain whether these substances had been absorbed during vegetation. To ascertain this, we burnt off the dry leaves in a platina crucible, and obtained from the leaves of the wheat grown with the solution of bone-earth, *four or five times as much inorganic matter* as from those grown from the solution of carbonic acid alone. And the further analysis of these ashes has shown the presence of phosphate and carbonate of lime in much larger quantities than in the other experiment. These results, by positively demonstrating the special influence of these salts of lime, also enable us to explain the action of certain manures. Besides the gaseous and ammoniacal products which are yielded by the decomposition of animal matters, the phosphates and carbonates of lime which they contain must also perform an important part in the assimilation of vegetables. Certain species of these latter require for their perfect development, certain mineral substances which decomposing animal matters can supply, and which the plants obtain from them by assorting them in a state of solution.

In relation to the above, the translator adds the following:

There is one very important conclusion to be drawn from this experiment which the author has overlooked. It was not to be wondered that the plants watered by carbonic acid refused or were unable to come to perfection, *but the fact that even bones were not able to mature the plants of wheat* is rather startling, and we refer to it here as another corroboration of the view advocated by one of the parties in a recent discussion "on the composition of manures," which has been carried on in this magazine for some time past. Notwithstanding the acknowledged importance of phosphate of lime, it would seem, both from the above discussion and these experiments by Lassaigne, that it is not sufficient of itself to bring the plant to maturity. If this be established as a fact, it ought to influence farmers in the purchase of their manures, of which it would appear that those only can be of permanent benefit to his farm which contain many other ingredients equally essential to vegetation.

Analyses of Manures.

At a late meeting of the Highland Agricultural Society, Mr. FINNIE spoke of the great advantage which had been derived by farmers in Scotland from the analyses of portable manures, upon which, he estimated, nearly one-half of the green crop of that country is dependent. The amount of guano, for instance, imported in 1837, was upwards of 220,000 tons. Great adulteration had been practiced with guano; and bone-dust had been mixed with ground oyster-shells. Various manufactured manures, of the constituents of which the farmer could not be acquainted, were offered for sale. In illustration he related the following: Some years ago I joined with two or three farmers in the purchase of some tons of nitrate of soda. None of us derived any benefit from the application of it. Most fortunately I had some left—got it analysed by Mr. Kemp at the College; and when the secret was explained, it was to a great extent mixed with common salt. I heard of a cargo shipped to a party in London; a chemist was ordered to examine it before taking it from the ship. The adulteration was detected, and immediately the ship was ordered off to Scotland, and sold amongst the farmers. I once purchased a quantity of guano from a party in Leith. Professor Johnston had given an analysis of it, but the sample sent to him had been very different from the stock. I found upon taking delivery that all was not right. I then had a sample from the stock analysed, and had no difficulty in procuring an abatement of 10 per cent. from difference of value. I cannot conceive how any agriculturist who expends his hundreds a-year upon portable manures is justified in applying them before being tested, and would grudge a few shillings per annum to obtain a chemist of skill who could satisfy him as to the purity of the article upon which he is not only expending a large sum of money, but upon the genuineness of which his green crop, and every succeeding crop in the rotation, is dependent; for, without a knowledge of the nature and properties of the materials employed by the agriculturist, it is evident that the result of many of the laborious and extensive processes incident to his daily occupation must be a matter of mere chance—thus contributing more than any thing else to the precariousness of the profits upon which his prosperity depends. I may be told this is a tenant's question, and let him look after his own interest and he will fare the better; but I hold whatever is necessary for the tenant cannot be dispensed with by the landlord; and if from not having a ready and cheap way of having his manures analysed, the loss of a crop is the consequence, is not the landlord's rent endangered? But I would respectfully submit that these portable manures, now so important an element in good farming, and for which I would say a chemist's services are required, leaving every other consideration, have done much already for the proprietors of land.

West-Highland Cattle.

In several of the last volumes of *The Cultivator*, we have given cuts and brief descriptions of the West-Highland cattle of Scotland; and we have more than once expressed our desire that some measures might be taken for the introduction of this valuable breed into this country. The following notice of them occurs in an account of the Falkirk Tryst, a celebrated Scottish fair for the sale of cattle and sheep. The account from which our extract is taken, appeared in the *Edinburgh Quarterly Review*.

Every isle and holm which opposes it rugged crags to the fury of the Western Ocean between Islay and the Orkneys; every mainland glen from the mull of Cantyre to Cape Wrath, pours in its pigmy droves, shaggy and black, or relieved only, as to color, by a sprinkling of reds, and of duns graduating from mouse to cream-color. From Northern and Eastern Sutherland, Caithness, Ross, and Inverness they come in longer on the leg, smooth [short-haired] and vulgar. From central Argyle, Perth, and from some of the islands, come the carefully bred West-Highlanders; these are the flower of the show, engage every one's talk, and attract every one's attention; every individual of them is a delight to the eye of a connoisseur. Aberdeen and Forfar send in droves of large and bony, but useful bullocks. A few Ayrshire cows and heifers for the dairy, some miscellaneous lots and a few Irish, make up the account. We do not know the numbers; we have heard of 30,000, and again of 60,000. The October show is the most imposing. The almost universal color is black; the moor is in appearance, one black mass. You may be accommodated with every size, from that of a Newfoundland dog, to a bullock of one hundred stones. The cattle are mostly in the hands of dealers, having been bought up at the northern and western markets; many, however, of the best West-Highlanders are brought to the Tryst by their breeders, and you may see a kilted laird from the Hebrides standing, like Rob Roy, at the tails of his own bonny stots and queys. A few small lots of a score each may be found, but they generally run from 50 to 300 and upwards. A purchaser of less than the whole of one of these large lots gets his number, not by selection, but by a cut: a drover passes through the black mass and cuts off by estimation the number; they are then counted and made up to the required figure by alternate selections on the part of the buyer and seller. No trading class can furnish more intelligent men than the Scotch stock-farmers—perhaps, indeed than the Scotch agriculturists generally; men well educated, of courteous and simple manners, of great intelligence and much general information, enterprising, and keenly alive to every reported improvement.

Top-Dressings for the Potato.

EDS. CULTIVATOR—If, as Professor Johnston thinks, "the benefit to be derived from a skilful treatment of the potato plant, does not terminate with the greater immediate crop we reap, but extends also, into future years, improving the seed, and rendering its after cul-

Table No. 1.

Kind of Top-Dressing	Quantity per acre of top-dressing.	Cost per acre of top-dressing.	Produce per acre, in tons.	Value per acre of produce.	Increase of product per acre by top-dressing.	Cost per ton of increased product.	Profit per acre in consequence of top-dressing.
	Cwts		Tons. cwts. qrs		Tons. cwts. qr.		
1. None, ...	0	$0 00	12 15 0	$117 93	0 0 0	$0 00	$0 00
2. Sulphate Soda, ...	2	3 76	12 15 0	117 93	0 0 0	no inc	loss.
3. Sulphate Magnesia,.....	1¼	3 12	13 5 0	122 53	0 10 0	6 25	1 50
4. Sulphate Ammonia,.....	1¼	7 75	14 1 0	134 13	1 15 0	4 43	8 45
5. Nitrate Soda,...........	1¼	7 75	16 0 0	148 00	3 5 0	2 38½	22 31
6. Sulphate Soda, ... Nitrate Soda, ...	1¼ ¾	6 19	18 0 0	166 50	5 5 0	1 18	42 38
7. Nitrate Potash,.........	1¼	10 75	18 10 0	171 12	5 5 0	1 87	42 44
8. Sulphate Soda,....... Sulphate Ammonia,..	1¼ ¾	6 19	18 16 2	174 70	6 2 2	1 01	50 58
9. Nitrate of Soda,...... Sulphate Magnesia, ..	1 1	7 25	22 10 0	208 12	9 15 0	0 74½	82 94

Table No. 2.

Kind of Manure.	Quantity per acre of Top-Dressing.	Cost pr acre.	Produce per acre, in tons, &c.	Value per acre of produce.	Increase of product by the dressing.	Cost per ton of increased product.	Profit pr acre in cons'q'uce of dressing.
			Tons cwt. qrs.		Tons. cwt. qrs.		
1. None, ...			13 10 0	$124 87			
2. Salt, ... Quick Lime,...........	1 cwt. 4 cwt.	$3 00	14 17 0	137 36	1 7 0	$2 23	$9 49
3. Nitrate of Potash,......	2 cwt.	13 50	15 5 0	141 06	1 15 0	7 72	2 68
4. Bone Dust,.............	18 bu.	11 25	15 13 0	144 76	2 3 0	5 23	8 63
5 Farm Yard Manure,....	10 t'ns	15 00	16 3 0	149 40	2 13 0	5 66	9 13
6. Nitrate of Soda,........	2 cwt	9 17	16 19 0	156 79	3 9 0	2 66	22 75
7. Nitrate of Ammonia,...	2 cwt.	13 87	17 15 0	164 18	4 5 0	3 26	25 43
8. Guano.	3 cwt.	10 50	19 11 0	180 84	6 1 0	1 74	15 45

Table No. 3.

Top-Dressing.	Quantity.	Cost.	Produce.	Value.	Increase.	Cost of inc	Profit.
			Tons cwt. qrs.		Tons. cwt. qrs.	Per Ton.	
None,..............			7 10 0	$69 37			
Soot,..............	40 bush.	$4 17	10 7 0	95 75	2 17 0	$1 46	$22 21
Manufact'r'd Guano,	2½ cwt.	9 37	9 7 0	86 50	1 17 0	5 07	7 76
Common Guano,....	3 cwt.	7 50	11 7 3	105 37	3 17 3	1 91	28 50

ture more productive," it behooves my brother farmers to pay attention to everything that can possibly improve it, as it is undoubtedly the most profitable and certain crop we raise. Therefore, I wish through your valuable journal, to bring under their notice the advantages of "top-dressing" with artificial manures. But at the same I wish them to understand that I am not speaking from practical experience, for until within the last month, I have not myself thought of it, though I hope next year to try it, and if so to give you the result.

Happening into a book auction one market night, I purchased "The Potato, by G. W. Johnson," a book published in London as one of a series, entitled "The Gardener's Monthly Volume." I have studied it thoroughly, and think that others could do so with great advantage, but as it is an English work not reprinted in this country, that will be impossible for most of your readers; therefore I have taken the liberty of preparing from it the accompanying tables and remarks, illustrative of the benefits to be derived from "top-dressing." First, let us examine some experiments made by Mr. Fleming, of Barochan. He had a light, loamy soil, with a hard retentive subsoil. He planted his potatoes on the 18th of April, in rows 26 inches apart, manuring the bottom of the rows with farm-yard manure, at the rate of 40 cubic yards per acre. The top-dressings were added on the first of June.

The Potato was, what in England is called the Early American. Table No. 1 shows the result. The price of potatoes that fall was £1.13s, (say $9.25) per ton, and the cost of the top-dressing includes hauling and putting it on.

Is not table No. 1, worthy of attention, of study? If, after our potatoes are planted, we can by an outlay of $7.25, reap an additional clear income of $82.94, shall we not do it?

This table (No. 1,) is worthy of study on another account. What produced the great increase in No. 9? Was it the soda? The soda alone (5) in larger quantity only gave 3¼ tons increase. Was it the magnesia? The magnesia alone (3) only gave ½ ton increase. I am rather disposed to give the soda the credit for the crop, as potatoes do not contain the one-half of one per cent. of magnesia; and Prof. Johnston, in his suggestions for experimental agriculture, mentions a crop of 30 tons produced with a mixture of one-third nitrate, and two-thirds sulphate of soda; whilst, on the other hand, Fleming mentions another experiment made by him, in which the magnesia only gave 11¼ tons. Yet if the soda made the crop, why did not the soda (5) by itself do as well? Possibly there was some acidity in the ground, which neither salt by itself corrected, but which when combined they operated on.

The experiments as per table No. 2, were made entirely with "top-dressing," the land being prepared on what is known throughout Ireland as the *Con-acre* system. That is land that has been long in grass, is marked out in ridges, the sets are laid on the sod about a foot apart, and covered about three inches deep with soil from the furrow. A shocking bad system, but one that occasionally yields a good crop. The sets were planted on the 15th April, and after they had sprouted, but before the shoots reached the surface, the dressings were applied, and an additional quantity of about two inches of earth placed upon the top. This was done on the 20th of May. The dung was well rotted. The other manures were mixed with dried mould before they were applied. The salt was that which had been used in a provision store, and consequently contained a considerable quantity of blood, fat, and other animal matter, which probably made it of greater utility than pure salt would have been.

The results as per table No. 2, are curious. Salt and lime produce the additional crop at next to the least cost per ton, yet they are *fourth* on the list as to profit. They produce cheap, but not in sufficient quantity. In this experiment, the nitrate of potash is the worst, making the extra product cost $7.72 per ton, whilst in the one above, it made it cost only $1.87, and was third best out of the nine, but then stable manure was used. The bone-dust and farm-yard manure are nearly equal, the former growing at a less cost, but the latter in greater quantity. Both of these will benefit the next crop, in all probability the farm-yard manure the most. The guano produced the greatest quantity at the lowest cost, but I doubt whether it will in any manner avail the next crop; but still in this experiment it was undoubtedly the best, as the $20 profit it made over either of the others, will more than buy any kind of manure wanted the next season. But the difficulty is, when the farmer has the $20 in cash, to get him to spend it again for manure.

Experiment No. 3, was made by Mr. Campbell, of Derry. The potatoes were planted on the 7th of May, in ground prepared in the usual manner, and manured with 30 tons farm-yard dung per acre. The top-dressing was applied early in June.

In this case again, the guano is the most profitable, though here it does not produce at the lowest price per ton.

I should like to make some further remarks, and ask my brother farmers a few questions for my own information, but must now bid them adieu, with the promise, with your permission, to see them again after they have reflected upon top-dressing for potatoes. S. S.

Improvements in Agriculture.

Eds. Cultivator—The table giving the estimate of the principal products of Seneca county in 1848, published in the July No. of your paper, is rendered interesting by calling to mind several important considerations.

In the census of 1845, Seneca county stood in her agricultural productions, above the average of the State. The estimate for 1848 shows a large increase per acre, and a much larger gross increase upon the productions of 1845, as will appear from the following extract, taken from the estimates of both years:

Year.	Wheat		Barley.		Oats.		Corn.	
	bush'ls	pr. ac	bush'ls.	pr. ac.	bush'ls.	pr. ac	bushl's.	pr. a
1848.	611,96	17.9	124,195	21.7	111,650	38 9	409,180	32.6
1845.	483,773	14.8	50,071	13.6	292,3 7	35¼	204,040	26.8
1840.	308,505		11,117		232,446		177,795	

One interesting consideration that this table suggests, is, that the farmers of Seneca county, availing themselves of their superior soil and location, and the lights that science is throwing upon the business of agriculture, are making a noble stride towards the highest state of good husbandry.

Another interesting consideration is suggested in the fact, that notwithstanding the superior advantages and management of the farmers of Seneca county, still the income on their capital and labor, is vastly inferior to that of any other of the great industrial interests of our country; and as upon the prosperity of agriculture depends the prosperity of all other interests, it shows how important it is that it should receive, both directly and indirectly, in every practicable way, the first consideration and the fostering care of our government.

Seneca county has about 194,700 acres of land. That land, together with the stock and utensils of her farmers, constitute their invested capital. That capital cannot be estimated at much less than $5,000,000. Their annual agricultural products amount to about $1,200,000, or 25 per cent. upon their capital. The income of all the other great industrial interests of our country; is shown by the census to be from one hundred to two hundred per cent. upon their capitals.

The population of Seneca county in 1845, was 24,972. The number of voters was 5,459, four-fifths of whom were employed in agriculture—if the same proportion exists there, in their population that usually prevails in the United States. Of course, the income of each individual engaged in that county in agriculture, was less than $300 during that year. The income of each individual engaged in the other pursuits, as shown by the census, averages annually near $700.

Another important consideration is suggested; that while the grain-growing business produces less on its capital and labor than is produced in other pursuits, yet the grain growing business of that county is better than that of wool-growing, and the farmers there will readily say that they cannot afford to grow wool on land which is well adapted to the growing of grain.

Another important consideration is, that although in Seneca county, as elsewhere, the business of agriculture produces less on its capital and labor than that of other interests, still it is the most desirable and commendable business of any in which the people of our country are engaged.*

First, because the capital invested in it is more secure than that invested in any other business.

Second, because men engaged in it enjoy greater independence. They are less dependant upon each other in that pursuit, than in any other.

If their income is less, their desires are less, and with a reasonable exercise of industry and prudence, a certain amount of income over expenditure, is always available.

In the business of agriculture, men of abilities and acquirements may enjoy as high degree of consideration as those do in almost any other employment.

The business is healthful, morally and *physically*, and while it produces as few causes for disquiet, I can conceive of no business out of which grow more sources of enjoyment.

It is a business, however, which is susceptible of infinite improvement, and men who, as individuals or statesmen, contribute most to such improvement, are deserving of the highest consideration from their countrymen.

One of the most important improvements yet to be made, is that science and mind may be brought to bear, so that labor may never be wasted by being misapplied.

Another improvement is, to devise such implements as may lessen the amount of labor to be performed.

Another and not less important improvement, can be made in opening to the products of the farmer, an unrestricted market at home and abroad, and in creating facilities for transmitting such products to such markets. A. Farmer. *Hillsdale, Columbia county, N. Y., July* 16, 1849.

American Institute.

The Twenty-second Annual Fair of this Association will be held as follows: Agricultural and Horticultural Exhibition on Tuesday, the second of October, at Castle-Garden, New-York. Plowing and Spading Matches on Thursday, the 4th of October, at Flushing, Long Island; Central Convention of Fruit Growers, on Tuesday, the 2nd of October, in the New Saloon, at, Castle Garden; Cattle Show on Wednesday and Thursday, the 10th and 11th October, at the corner of Twenty-Third Street, and Fifth Avenue, rear of Madison Cottage

Liberal premiums are offered for Short-horn, Hereford, Devon, Ayrshire, Alderney, and "native" cattle; also, for blood and farm-horses; for Merino, Saxon, South Down, and long-wooled sheep; for swine, poultry, &c.

The general arrangements for the exhibition are comprised in the following programme:

First Week. *Monday, Oct.* 1—Will be appropriated for the arrangement of the contributions. Vegetables, Fruits and Flowers, for the Horticultural Room, should be brought this day before 12 o'clock.

Tuesday, Oct. 2.—The exhibition will open to the public at 9 o'clock, A. M., and close at 10 o'clock, P. M., which arrangement will continue during the fair. The opening address will be delivered this evening, at 7½ o'clock, in the front saloon. A band of music will play during the evening. At 9 o'clock, a grand display of fireworks.

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* By the census of Massachusetts in 1845, the amount of capital employed in manufacturing and the mechanic arts, was $46 161,217. The number of hands employed was 129,013. The value of their products was $87,924,083 or near two hundred per cent. income upon capital employed, and near $700 annual income from the labor of each individual.

Wednesday, Oct. 3.—The Steam Engine, with moving machinery, will be in operation and continue during the Fair.

Thursday, Oct. 4.—Spading Match, Plowing, and Testing of Plows, at Flushing, L. I., in conjunction with the Queens County Agricultural Society. Steamboats will leave the Battery at an early hour for the Plowing ground. An address on the field.

Saturday, Oct. 6.—Fireworks this evening, at 9 o'clock.

SECOND WEEK.—*Monday, Oct.* 8.—Great Show of choice Roses and Dahlias at 12 o'clock, for special premiums. Cattle and other live stock to be exhibited on Wednesday, must be entered on the books this day, and pedigrees delivered to the clerk, at the Committee-room, at Madison Cottage, corner of Fifth Avenue and Twenty-Third Street. If previously sent to A. Chandler, Sup. Agent of the Institue, they will be attended to.

Wednesday, Oct. 10.—The Cattle Show will open at 10 o'clock, A. M., at Madison Cottage, corner of Fifth Avenue and Twenty-Third Street, when all the animals must be on the ground.

Thursday, Oct. 11.—The second and last day of the Cattle Show. The Hon. Levi Woodbury will deliver the Anniversary Address at the Tabernacle, at 7½ o'clock, P. M. Tickets gratis, may be had of any of the managers, or at the Clerk's desk. Music by an accomplished choir, under the direction of Mr. George Andrews.

Saturday, Oct. 12—Pyrotechnic exhibition for premium, at 9 o'clock, P. M. Each exhibitor will be required to fire three pieces. Entries to be made on the books before 12 o'clock, M.

Wheat Culture.

EDS. CULTIVATOR—Will you or any of your correspondents be so kind as to answer the following queries through the columns of your excellent journal? viz:

1. What is the proper time for a clover fallow to be made for wheat?
2. Should the clover be cut or grazed before fallowing?
3. What is the proper depth to plow to insure the greatest yield?
4. Is early sown wheat more subject to the attack of the fly?

The above questions cannot, of course, be answered with precision,—as the circumstances of soil and climate will have their influence,—but replies may perhaps, be given that would be *generally* applicable. JUVENIS AGRICOLA. *Long Hill, Amherst Co., Va., July* 20, 1849.

A fallow for wheat is generally commenced in June, or the last of May. There is a difference of opinion as to whether it is best to turn in the whole growth of clover, however great it may be, or whether it should be partially grazed or mowed off; and we do not think that experiments have been made with sufficient accuracy to settle the point. But on one point, we think there is a general agreement among farmers who are in the practice of plowing in clover, and that is, that it is best to let it pass the stage in which it contains the most sap, before it is plowed under. The reason is, that a great quantity of green watery matter, produces an acid in the soil, which is injurious to vegetation. On this account many prefer having the clover partially fed off, and that what is left is fairly turned towards ripening.

It is common to plow fallows once or twice after turning in the sod, previously to being sown; the first (or rather the second) plowing to be done when the sod is fairly dead, and partially decomposed, and the next just before seeding, which is generally from the 10th to the last of September.

The practice has been considerably adopted of late years, to defer the plowing of clover-ley till about the time for sowing wheat, and to sow immediately on the furrow, after but one plowing. In this case it is common to pasture the clover, more or less, according to the wants of the live-stock of the farm, or to mow the first growth and save it for hay. This practice has been quite successful, especially on loamy soils, or such as do not require to be much worked to render them sufficiently friable. The great benefit of fallowing, is on land which either requires cleaning from foul plants, or from its tenacity, requires a more thorough pulverization and aeration than can be effected by one plowing.

The depth of plowing, on ordinary wheat soils, is generally seven inches. It is found that stiff soils require deep stirring; and it is not unfrequently the case, that the subsoil, in our best wheat districts, is as rich or richer in the elements which nourish wheat, than the surface soil. It only needs the action of the air to develop or render soluble its valuable alkaline and other properties. There are lands of a different character, however, on which wheat is raised—lands on which the subsoil does not thus abound with valuable saline matter; and on these lands a less depth of furrow, with a proper use of the subsoil plow, is deemed preferable to a deep burying of the surface soil, and the consequent result of bringing to the surface the comparatively barren subsoil.

Early sown wheat may form a harbor for the Hessian fly in the fall—as it is not unusual for a generation of that insect to be produced before the setting in of winter. It may not be perfected in the fall, but will remain in the larvæ or in the "flax-seed" state till spring, when it is matured and brought out by a few warm days, ready to attack the crop in full force. Where this insect is known to prevail, it is, therefore, deemed advisable to defer the sowing of wheat to so late a period that the plant would not make its appearance till cool weather should render the fly incapable of mischief.

But it should be remembered, that the course which would be a protection against the Hessian fly is *not* a protection against the wheat midge, miscalled "weevil" Early *winter* wheat is the most likely to escape the latter insect, and that which is rather late, most subject to injury. The farmer must, of course, make his calculations as to which of these enemies, he is in the greatest danger. If he is most likely to be attacked by the Hessian fly, he will sow late; if by the midge, he will sow early, *and an early kind.*

Management of Sheep.

At a late meeting of an English Farmers' Club, the subject for discussion was,—"The best method of managing a flock of sheep for breeding purposes." Mr. Hardwick remarked that in regard to breeding ewes, he should prefer keeping them well and even all the year round. He did not like sudden changes from high to low feeding, or *vice versa*, though he thought ewes might advantageously have more food of a good quality after they were half gone with lamb, than before. As to the most profitable way of making up lambs for sale. if he wanted a horse to work, he would not give £5 more for it because it was fat; so with lambs, if he wanted lambs to work, he would not give 5*s.* more for them because they were fat, and it must be remember ed that it was not all customers that wanted these fat lambs. As to buying and working fat rams, he must confess he had a great objection to these fat animals. He was fond of examining and admiring the different points of an animal, and in an anatomical point of view, it was impossible to say whether these points were good or symmetrical if the animal was fat. He believed that serious evils and losses accrued from persons not considering what they were about, when they gave great prices for fat rams. Rams might be compared to stallions, made fat for the purpose of disguise, and in order to deceive those who were not judges of the proper points of an animal. A flock-master should first consider what were the proper characters for sheep, and then select ewes having such characters, and endeavor to find rams to match; this was, in his opinion, far better than to make wide crosses.

New-York State Ag. Society.

From the report of the proceedings at the meeting of the Executive Committee, on the 9th of August, we give the following.

The Secretary reported, that he had been to Syracuse since the last meeting of the Board, and that in connexion with Col. Sherwood, Mr. Rust and Mr. Burnet, of the Executive Committee, the grounds were marked out, and the erections necessary for the show designated. The contractor, Col. Voorhies, with an efficient force was at work preparing the erections, and that every thing required for the Society would be in readiness previous to the time of meeting. The citizens of Syracuse were preparing for the reception of visitors, and every accommodation that the city could supply, both public and private, will be open for the entertainment of those in attendance at the show. The Horticultural Society of Syracuse are making arrangements for the suitable accommodation of the 'North American Pomological Convention.'

The assurances received from all parts of our own country, as well as the Canadas, are such as to render it probable that the coming exhibition will be one of the most extensive ever held by the Society.

The Secretary also reported that he had called upon the Hon. HENRY CLAY, of Kentucky, (now at Saratoga Springs,) and presented to him an invitation on behalf of the Executive Committee, to attend the annual meeting at Syracuse. Mr. Clay expressed himself highly gratified at the invitation, and said, that it would give him the greatest pleasure to be present at the meeting and witness, as he had long desired to do, the improvements of the farmers of New-York, as well as to meet the farmers themselves. He feared, however, that he might not be able to enjoy that pleasure, as his arrangements were such as to render a return to Kentucky in the forepart of September necessary. He desired to have communicated to the Executive Committee and to the Society, his best regards for their polite invitation, and an assurance that should it be at all consistent with his engagements, he would avail himself of the opportunity to attend the show.

The Secretary reported that a letter had been received from Prof. Johnston, that he should sail from Liverpool in the steamer of the 28th July, land at Halifax, and spend a short time in New Brunswick, where he had an engagement; and would arrive here in time for our annual show, and would spend in this State and vicinity the month of September. (Prof. J. arrived in the America.)

The Secretary presented the *Transactions* for 1848, which have been received, and are ready for distribution.

A letter from G. Elfentrez, Director of the Imperial Botanic Garden, at St. Petersburgh, Russia, acknowledging receipt of Transactions of the Society, with the thanks of the Directors, and also that the publications of the Imperial Society would be duly transmitted in exchange.

E. & T. Fairbanks & Co., St. Johnsbury, Vt. A platform scale No. 10, and druggists scale for the Museum of the Society, of very superior finish and workmanship.

C. D. Mynderse, Seneca Falls, writes. We had a beautiful time for haying and harvesting. We have secured a larger crop of hay than usual this season. Wheat is more or less injured by the wheat fly, some late pieces very much, otherwise wheat bids fair to yield a heavy return. The long continued drought, which has continued about six weeks, with but one or two slight showers, I am fearful will prove ruinous to the corn and potato crops as well as clover.

Geo. Warren, Albany. Kendall's Thermometer, for Museum, &c.

Hon. Ashbury Dickens, Secretary U. S. Senate. Third report of the Smithsonian Institution, made to the Senate of the United States.

Fine sample of the "Clump Spring Wheat," from J. McD. McIntyre's farm near this city. The heads are short, but remarkably well filled, and the grain very large.

Mr. Wilbur of Auburn, fine samples of *winter* Barley, raised by him the present season.

Hon. Anson Miller, of Rockford, Northern Illinois, informs us in relation to the wheat crop, that the wheat has been greatly injured by the rust. The winter wheat, especially, it is thought, will be nearly if not entirely destroyed. The malady, as is always the case, prevails more generally on the low, rich, sandy loam soils. We have heard no general complaint of this kind as yet, from the Pekatonic country, which has a strong clayey subsoil, and where winter wheat always succeeds if any where.

From J. Hall Maxwell, Secretary Highland Agricultural Society of Scotland. Proceedings of the half yearly meeting of the society.

Edward Bullen, Esq., Secretary Royal Agricultural Improvement Society of Ireland, 1 vol. Quarterly Journal of the Society for 1849; Premium List and Regulations of the Society, for their Annual Cattle Show for 1849; and Reports of the Practical Instructors in Husbandry in different districts in Ireland.

Mr. B. writes:—"It is my painful duty also, to inform you that affairs look more gloomy in this country every day. The prostration of all classes is increasing, and no one can see the least signs of reaction or improvement. With a dense and pauper population of eight millions, circumscribed within the limits of an island not larger than some of your middle-sized States, you may easily conceive the effects arising from the sudden as well as repeated destruction of its staple article of food. The consequence is, that the people have sunk under the pressure, and are directing themselves in one vast tide of emigration, to the shores of your more favored country, and projects are now on foot for carrying out the system on a much more systematic and extensive scale, than ever before was contemplated. I am aware that this great influx of persons, many of them in distressed and burthensome circumstances, must be a great source of inconvenience to those localities in which they first land, previous to locating themselves in the more remote districts; but that is a slight penalty for you to pay, considering the privations which have afflicted the countries of the old world, and this unfortunate one in particular, these few years back. I trust, therefore, that my poor countrymen will be received by yours with consideration, and that adequate encouragement will be made for pushing them on into the centre of the country, where, instead of being burthens and outcasts in their native land as at present, they may be come a source of wealth and prosperity to the land of their adoption."

Alexander Walsh.—This distinguished and ardent friend of Agriculture and Horticulture, died at his residence in Lansingburgh, on Saturday last, the 3d Aug., Mr. Walsh was one of the earliest members and promoters of this Society, and has ever been among its most efficient supporters. The Executive Committee, desirous of testifying their respect to one who for many years was an officer of the Society, and actively engaged in advancing its interests, have adopted the following preamble and resolutions:

Whereas intelligence has been received of the decease of Alexander Walsh, Esq., of Lansingburgh, one of the earliest friends and promoters of this Society, and for many years one of its officers, and ever an active and efficient friend of Agriculture: Therefore,

Resolved, That the Executive Committee have heard with deep regret of the decease of their respected friend, and that they deeply sympathise with the bereaved family in their affliction.

Resolved, That a copy of the above proceedings be enclosed to the family of the deceased, signed by the Secretary.

A draft of a memorial to the Legislature, on the subject of establishing an Agricultural College and Experimental Farm, was presented and adopted, and ordered printed for circulation.

The Executive Committee adjourned, to meet on Monday, the 10th of September, at 3 o'clock, P. M., at Rust's Hotel, Syracuse. B. P. Johnson, *Sec'y*.

Summer Fallows

Eds. Cultivator—I have been a reader of the Cultivator for years. In that time I have read several pieces discarding summer fallowing for wheat. The writers must either labor under a mistake, or the practical operation of farmers in this vicinity, (than which there is no better for wheat,) are altogether wrong. I admit that favored fields—favored with the application of all the manure of the farm—may produce a tolerable crop of wheat succeeding summer cropping; but I very much doubt the propriety of the wheat-grower adopting this method extensively. There are numerous objections that might be urged against this practice—such as requiring double the number of laborers on the farm—the necessity of a large amount of work being performed in a given time—together with the difficulties attending the vicissitudes of the season. Should the fall prove to be very dry the plowing could not be well done, and then the uncertainty of a quick germination, and a firm root-hold in the earth, which is requisite to ensure a good crop.

The advantages of summer fallows are, the plowing and subsequent cultivation of the land can be performed at leisure after the bustle and hurry of the spring work is over, which affords sufficient opportunity to extirpate that pest of the farmer the Canada thistle, which threatens, and unless checked, will obtain exclusive sway. By judicious cultivation, the fallow retains sufficient moisture when the season of sowing arrives, to produce a quick germination, and advance the future fall growth of the young plant.

I have had some experience in raising wheat by both methods, and the conclusion to which I have arrived is, that raising wheat after summer cropping, under favorable circumstances, and with favorable seasons, does very well; but the great and chief dependance of the farmer is from his fallows.

I venture the assertion that summer fallowing is essential to the successful cultivation of wheat, and when I say this, I think I am sustained in the position by three-fourths of the practical wheat-growers of the land. If any are of a contrary opinion I should be glad to hear from them. W. Ansley. *Rushville, Yates Co., N. Y.*

Farm Horses.

Eds. Cultivator—Having read with much interest various communications in "The Cultivator," respecting some of our most noted breeds of horses, I offer a brief description of a useful, and in this region very popular stock of agricultural and draught horses, which have sprung from a horse called Samson, imported by me from the south of England, in 1837. As some of them will probably be shown at our next State Fair at Syracuse, I thought a few lines by way of introduction might be useful.

Samson was selected from some of the best stock of farm horses in the county of Sussex, England, for the express purpose of giving more bone, muscle, and constitution, to the agricultural horses of America. How far he succeeded, his stock will show. They mostly inherit, in a great degree, the shape and disposition of the sire; but being bred from smaller mares, they do not equal him in size, though they are large enough for all ordinary purposes; being remarkably "compact," strong, and hardy, kind and true in harness, with as much spirit and action as is useful and pleasant in a work horse.

Old Samson was a perfect horse of his kind, of immense muscular power, 16 hands high, and weighed 1660 pounds. He died in the fall of 1845.

The young ones vary from 14 to 16 hands, and weigh from 1200 to 1500 pounds. They may be found from central New-York through the western counties, some in Michigan, Wisconsin and Illinois. Where best known they out-sell any other stock of horses for hard service. Several have been kept as Stallions, and are generally well patronised. Among others in this county, is one owned by Nottingham & Allen, of Palmyra, one by Wm. Swales, of Sodus, another by Z. Lane, of Lyons. In Ontario county, Rushmore, Brown and Bowers, have each one. In Monroe county, Jones and Reeves, one each. Heston's of Genesee county, Sybrant's of Niagara county, and others, would all pass as good horses in any farming district, and are particularly adapted to cross with the light-boned, high-blood stock of the Southern and Western States. John Robinson. *Palmyra; Wayne Co., August*, 1849.

Show of the Royal Agricultural Society.

The tenth show of this society took place at Norwich, in July last. The display of live stock was above that of an average of the Society's exhibitions, and that of implements considerably greater. The number of entries for stock was 624, and for implements 1880. The *Mark-Lane Express* remarks:

"As regards the exhibition of stock, taking it as a whole, we have difficulty in bringing ourselves to the conclusion that it reaches an average in point of quality. There were some animals of a very high order or merit, such as Mr. Booth's two short-horn cows, and Mr. Wilson's yearling heifer, an almost perfect animal. Mr. Quartly's Devon bull could scarcely be surpassed. The Hereford and Devon classes were more evenly good than the short-horns. The yearling classes of all were very promising. The show of Southdown sheep far exceeded that of former years; Mr. Jonas Webb was eminently successful, and deservedly so, having won the first and second prizes for shearling rams. It is said that the judges selected six rams out of the whole number exhibited, as being far superior to any others, and that they had some difficulty in deciding to which of these splended animals the prizes should be awarded. It turned out afterwards, that *the whole six* *were Mr. Jonas Webb's!* Mr. Fisher Hobbs, who appeared for the first time as a Southdown breeder, took the first prize for rams of any age. The show of pigs was not so varied as usual. It will be seen, however, that Mr. Hobb's improved Essex maintained their character, carrying off first prizes in two classes. Mr. Hobbs was very successful, carrying off more prizes than any other single individual. The implements were most numerous and varied, manifesting a continuous improvement in the manufacture."

State Fair.

There is every appearance that the approaching State Fair at Syracuse, will be fully attended, not only by our own farmers and citizens generally, but by numbers from the neighboring states and from the Canadas. It will have been seen by the doings of the Executive Committee, published in this number and in our last, that the most ample arrangements have been made for the exhibition. The particulars in regard to the premises, &c., can be learned from the printed catalogue of the society, to be had on application to the Secretary, B. P. Johnson, Esq., or they can be obtained at the business office of the society at Syracuse, after the first of September. The following regulations of the society should be observed:

The Executive Committee will meet on the show-ground on Tuesday the 11th at 12 o'clock, and the judges are requested to be present, as the vacancies will then be filled. This day (11th) will be devoted to examinations by the judges; and the grounds will not be opened, except to officers, guests, delegates, members, judges, and exhibitors. On Wednesday, 12th, the grounds will be open to the public, and continue open for two days.

The Annual Address by Prof. J. F. W. Johnston, of Durham, England, will be delivered on Thursday, 13th, at 3 o'clock P. M., on the show-ground.

Tickets will be furnished by the rail-road companies at half the usual rates, enabling visitors to return any time during the week of the show, and animals and articles for exhibition will be transported free, as heretofore.

Exhibitors of stock should give at least one week's notice of their intention to send stock, to the person at the station from which the stock is to be sent, viz: to E. Foster, Jr., rail-road office, Albany; L. R. Sargeant, Supt. Troy and Whitehall roads; G. W. Young, Supt. Schenectady; T. M. Francis, rail-road office, Utica; W. D. Stevens, Oswego; J. B. Dill, Auburn; John Fargo, Geneva; Joseph Alleyn, Rochester; M. Beach, Batavia; Wm. Wallace, Supt. Attica and Buffalo rail-road; P. N. Rust and J. B. Burnet, Syracuse.

Articles designed for exhibition should be carefully labelled with the owners' name and residence, and may be directed either to P. N. Rust, J. B. Burnet, Roger Billings, or B. F. Colvin, Syracuse.

Entries may be made at the office of the secretary at Rust's Hotel, Syracuse, and fees of membership paid *after* the first of September. On Monday the 10th of September, the business office will be opened on the show-grounds, and all entries must then be made there.

Sales of Stock will take place on Thursday the 13th. It is expected that there will be offered for sale, Short Horn cattle from the herd of Col. J. M. Sherwood and others; Herefords from Messrs. Bingham, of Vermont; Devons from Mr. Washbun, of Otsego county, and Mr. Blakeslee, of Connecticut; sheep from Messrs. Bingham, Blakeslee, Sherwood, and others; horses from Mr. Burnet and Mr. Thompson, of Syracuse, Mr. Blodgett and others, of Vermont. For particulars in regard to the stock offered by Messrs. Bingham, Blakeslee, and Blodgett, see their respective advertisements in this, and the last number of *The Cultivator*. There will be other stock, especially horses, from out of the state, which will be offered either for sale or exhibition. Mr. Wier, of Walpole, N. H., will be on the ground with the old Gifford Morgan Stallion. Mr. L. D. Harlow, of Hartland, Vt., will also be present with the Morgan horse Grey-Hawk.

We are authorised to state that articles, or stock intended for exhibition from Canada, will be admitted by way of Oswego free of duty.

The North American Pomological Convention will open its session on Friday morning, September 14th, at Rust's Hotel.

Prize Sheep.

Eds. Cultivator—I noticed, lately, a communication on the subject of Cotswold sheep, from a gentleman in Virginia, in which he says he imports sheep from England " every two years, and sometimes every year," when he " can get sheep that have taken the Queen's or Royal prizes." That, he considers the " severest ordeal for sheep to go through." His orders, he says, " are not limited in price," as he is " determined to import none but the best," and as the " cost and risk are great," he " requires the Queen's prize sheep only."

Will this gentleman be so good as to inform the public what this " *Queen's prize* " is? By what association, or authority is it offered? J. P. R. *Montreal, C. E., August*, 1849.

Crops in Virginia.

The wheat harvest is ended; and with us, as well as other portions of the state which I have heard from, more than an average yield in quantity and quality may be expected—although it was much later than usual; increasing the chances thereby, in favor of its taking the rust, to which our late wheat is much subject.

The growing crop, and vegetation generally, owing to the cool and dry weather during the spring, is some two weeks later than common Indian corn is, the great favorite with our Virginia farmers and planters, and the tenacity with which they adhere to their opinions concerning it, and the exertion brought into requisition in cultivating it on their worn out lands, would lead any one to infer that it was rather an improver than an exhauster of soil. The present crop looks promising—though late; as the season has been quite unfavorable for it, having had great extremes of weather the whole season; and interrupted also by the clover worm, (supposed to be) an insect which preys upon the roots of the corn. The oat crop will not be an average one, and so in regard to the hay crop, though having had fine seasons lately, the second mowing may be better. J. A. *Long Hill, Amherst county, Va., July 20th*,

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The Wayne County, Pa., Agricultural Society will hold its annual show at Honesdale, Oct. 7. P. Bushnell, Esq., will please accept our thanks for the list of premiums, &c.

Hessian Fly and Good Wheat.—J. Oglesby, in the *Pennsylvania Cultivator*, states that he had a nine acre lot, from which he obtained 60 bushels of oats, the rest of the crop being briars, sumac, sassafras, Canada thistles, poke, elder, and nearly all other kinds of weeds. When the oats were harvested, the bushes were grubbed, and the weeds cut with a scythe. When perfectly dry, they were burned in a strong wind, as they lay over the ground. The nine acres then received 700 bushels of lime—the land was well plowed—and the next year it yielded 390 bushels of good wheat, untouched by the Hessian Fly, the fire having destroyed them.

Domestic Economy, Recipes, &c.

Currant Wine.—A palatable and wholesome wine—or at least useful "as a medicine," in many cases—may be made from the currant. We have, in former years, made wine from the red currant by the following recipe, which was considered of so fine a quality as to be ordered by the physicians for their patients, in preference to the imported kinds. Its cost was not over fifty cents per gallon. Though rather late in the season, we publish the recipe at the request of several correspondents.

To each gallon of clear juice was added two gallons of water, and to each gallon of the mixture was added three and a-half pounds of good brown sugar. After the sugar was dissolved, the liquor was put into good barrels, placed in the cellar; and when the fermentation had subsided, it was bunged tightly. In February, one gallon of the best fourth-proof brandy was added to the barrel. In May following, it was bottled. Like other wines, it improves with age.

White wine may be made with white currants, using the same proportion of white sugar as is named of brown, for the above—the liquor to be treated in the same way except that no brandy is added.

The following recipes are from Mrs. Rundell's "*Domestic Cookery.*" Elder wine is considered an excellent remedy in influenza, sore throat, &c.; and black currant wine highly useful in "summer complaints," dysentery, &c.

Elder Wine.—To every quart of berries put two quarts of water, *boil* half an hour, run the liquor and break the fruit through a hair sieve; then to every quart of juice put three-quarters of a pound of Lisbon sugar, coarse, but not the very coarsest. Boil the whole a quarter of an hour, with some Jamaica peppers, ginger, and a few cloves. Pour it into a tub, and when of a proper warmth, into the barrel, with toast and yeast to work, which there is more difficulty to make it to do than most other liquors. When it ceases to hiss, put a quart of brandy to eight gallons, and stop up. Bottle in the spring or at Christmas. The liquor must be in a warm place to make it work.

Black Currant Wine.—To every three quarts of juice, put the same of water unboiled; and to every three quarts of the liquor, add three pounds of very pure moist sugar. Put it into a cask, reserving a little for filling up. Put the cask in a warm dry room, and the liquor will ferment of itself. Skim off the refuse, when the fermentation shall be over, and fill up with the reserved liquor. When it has ceased working, pour three quarts of brandy to forty quarts of wine. Bung it close for nine months, then bottle it, and drain the thick part through a jelly-bag until it be clear, and bottle that. Keep it ten or twelve months.

To Remove Marks from a Table.—If a whitish mark is left on a table, by carelessly setting on a pitcher of boiling water, or a hot dish, pour some lamp oil on the spot, and rub it hard with a soft cloth. Then pour on a little spirits of wine or Cologne water, and rub it dry with another cloth.—The white mark will thus disappear and look as well as ever.

Dryed Apples.—Some varieties being much more tender in their texture than others, dissimilar kinds should be kept separate, to prevent one portion stewing too much, while another remains hard.

Dried Peaches.—The following is said to be an excellent mode of drying peaches and plums. The fruit is first skinned by being placed a short time in a strong alkaline solution, (ley, or solution of potash,) the stones are then removed, and they are dried in a slow oven.

Preserving Apples.—It is asserted that plaster or gypsum, from its soft texture, and the compact, air-tight bed which it forms, is one of the best substances to envelope fruit for preserving. The saw-dust of the maple, which imparts no bad flavor, after being thoroughly dried by fire heat, has been found excellent for imbedding rare fruit, when kept in a dry cool place.

Making Vinegar.—Nearly every one knows that in the conversion of cider to vinegar, exposure to the air is essential. The more thorough this exposure, the more rapid will be the formation of the vinegar. The *Ohio Cultivator* says, "we have seen this effectually done by causing it to run slowly from a barrel placed up stairs, through an aperture in the floor and ceiling, on a loose pile of fine sticks or shavings below, through which the air could pass freely, then draining into a cask into the cellar."

Vinegar from Beets.—It is stated that the juice of one bushel of sugar beets, will make from five to six gallons of vinegar, by washing, grating, expressing, and exposing, two weeks to the air in the barrel, with a gauze-covered bung hole.

To Prepare Rennet.—Take a gallon of blood-warm water to each rennet; soak, after stirring, for 24 hours; strain the liquor and let it settle, saturate with salt, and skim off any scum.

Answers to Correspondents.

Cherry for a Name.—L. W., Middleburgh, Schohaire county, N. Y. The cherry sent appears to belong to the family of mazzards. You say it was a "sprout" from a tree brought from England by Sir William Johnson. If that tree was budded, it is probable the stock was a mazzard—as it is common to bud on such stocks—and hence your tree, being taken from the root, would produce the same kind as that stock, and not the kind which was budded on it.

Black Earth.—Z. S. C., Westhampton. Mass. If the black earth of which you speak, contains considerable vegetable matter, or partakes of the character of peat, it will pay the cost to make it into a compost with animal manure. Try plaster on your land, at the rate of a bushel or two bushels per acre.

White Thorn from Seed.—J. C., Brandon, Vt. We are not acquainted with any better way of raising this plant from seed, than to gather the haws in the fall when they are fully ripe, and plant them about two inches deep in any good loamy soil. All kinds of thorns are slow in germinating, and the plants do not all show themselves till the second summer after they are planted. If any of our friends know a better process than that mentioned, we would thank them to make it public.

Spaying Heifers.—A Young Farmer, Roswell, Ga. You will find full directions in regard to this operation in our August number.

Bone Dust.—J. R. S., Clarksville, Ga. Bones are ground in mills prepared for the purpose. They are ground to various degrees of fineness, as is desired.

Chinese Geese.—J. F. S., Weldon, North Carolina. Very fine geese of this kind can be had of Messrs. H. & A. Mesier, of Wappingers Creek, Dutchess county, N. Y., at $5 per pair. We do not know any reason why they would not do as well in your section as here. They are a very handsome and prolific kind, breeding twice and sometimes three times in a season.

Notes for the Month.

Communications have been received since our last, from Agricola, F. Holbrook, Lewis Sanders, Observer, Sydney Sinclair, John Robinson, L. Durand, A Gleaner of Agricultural Knowledge, Dean, S. W., John Conant, A Young Farmer, An Observer, A. S. Copeman, A. Stevens.

Acknowledgments.—"History of Chemical Investigation of Maize, or Indian Corn," by J. H. Salisbury—a *prize essay* of the New-York State Agricultural Society—from the author. The "Edinburgh Evening Courant," containing a notice of the doings of the Highland and Agricultural Society of Scotland, at its last half-yearly meeting—from an unknown friend. Transactions of the New-York State Agricultural Society for 1848, from B. P. Johnson, Esq., and C. Van Benthuysen, Esq.

Arrival of Prof. Johnston.—This gentleman arrived at Halifax, N. S., about the 10th of August. He is expected in Albany about the first of September, and will proceed to Syracuse in time for the delivery of the address at the State Fair.

School of Applied Chemistry.—We would call particular attention to the advertisement of this school, which will be found in our present number. The institution is under the direction of Professors Silliman and Norton—the latter having special charge of the agricultural department. Prof. Norton's writings on agricultural subjects are very extensively known, and are highly approved by our best practical farmers. The school has had many young farmers, as students, at former terms, and we have heard from them repeated expressions of gratification, in relation to the advantages of the instruction they had there received. It should be remembered that pupils can enter this school for a single term, or for several terms, just as they choose,—the school being open to all, whether students of the college or not.

Devon Cattle.—In the article on Devon cattle, published in our April number, (current volume) we mentioned some of the breeders of this stock in this country. The name of Mr. E. P. Beck, of Sheldon, Wyoming county, N. Y., should have been included. He has been many years engaged in breeding this kind of stock, and has shown some of the best animals we have ever seen of the breed. The two fine Devon bulls which received the first and second premiums at the State Fair at Buffalo, were of his breeding. We spoke particularly of these animals in our notes on the show, published in the October number, last year. There are other breeders of Devon's whose stock deserves notice, but for which we have not room at present. Mr. Cowles, of Farmington, Ct., it will be seen by his advertisement, offers for sale several of his fine herd.

☞ By Mr. Bement's advertisement, it will be seen that he is engaged in the preparation of various articles useful in household economy. We have tried his table salt, his ground rice, wheat grits, &c., and find them all first rate in their kind. His establishment is well worthy examination.

Early Orleans Plum.—We are indebted to Mr. Kirtland, of the Cantonment Farm, Greenbush, for handsome samples of this fine early variety of plum. They were ripe the first week in August.

Erratum.—In the article on Wood's Plow, in our July number, a typographical error escaped our notice till too late to rectify it, in which the cost of patterns was made incorrectly to read $15,000 instead of $1,500.

Death of Friends of Agriculture.—Since our last number went to press, we have received intelligence of the demise of several individuals prominent among the promoters of agricultural improvement, and who will long be missed in the circles in which they moved. Among these, we have before us the names of Elias Phinney, Esq., of Lexington, Mass.; Hon. Theodore Lyman, of Boston; Alexander Walsh, Esq., of Lansingburgh; Hon. E. Mack, of Ithaca; Dr. H. Gates, of St. Louis, Mo.

Our readers will find an interesting sketch of Mr. Phinney, written by our able correspondent, Mr. Holbrook, in this number.

Mr. Lyman was an ardent and efficient friend of agriculture and horticulture. He liberally endowed the "Farm School for Boys," at Westboro', Mass., and gave the sum of $10,000 to the Massachusetts Horticultural Society, besides making other munificent donations for similar purposes.

Mr. Walsh was one of the early supporters of the New York State Agricultural Society; was for several years a constant attendant at its meetings, and rendered valuable services in advancing its interests. The resolutions passed by the Executive Board in reference to his death, will be found on another page.

Mr. Mack was warmly devoted to the advancement of agriculture, in which he had for several years been practically engaged.

Dr. Gates was formerly editor of the Iowa *Farmers' Advocate*, and since the discontinuance of that paper, was senior editor of the *Valley Farmer*, published at St. Louis. He was an able writer, and in his death, the agricultural press has sustained a loss.

☞ Since the above was in type, we have heard, with deep regret, of the death of Col. Edmund Kirby, of Brownsville, Jefferson county, N. Y. He died at Avon Springs, on the 20th of August. He had been attached to the army since 1812, and for many years had served in the capacity of Pay-Master. He was a volunteer aid of Gen. Taylor, in the late war with Mexico. But though a soldier by profession, he was ardently devoted to the improvement of agriculture, and the development of all the resources of his state and country. He had been an active officer of the New-York State Agricultural Society, and at the time of his death, was one of the Commissioners appointed for preparing a plan for an Agricultural School.

Transactions of the New-York State Agricultural Society for 1848.—This volume contains an unusual amount of valuable information. It is considerably larger than any previously issued by the society, and comprises 975 pages. The principal increase of matter is in the form of essays and elaborate papers on various important subjects. Of this class we may mention the highly valuable essay on the "Analysis of Indian Corn," by Mr. J. H. Salisbury, and the first portion of the "Survey of Washington County," by Dr. Fitch. These two papers form 400 pages of the volume. There are many other valuable articles in the work, from some of which we have already given copious extracts. We copy in this number, as will be seen, the statement of Mr. Foster in regard to his farm, which received the first premium of the society for last year. In future numbers we shall have occasion to make further drafts on the volume, more especially in reference to the essay on Indian corn, which contains many useful facts not brought out by any previous investigation. We are indebted to Mr. Johnson, the Secretary of the Society, and also to Mr. C. Van Benthuysen, for copies of the work.

The Albany and Rensselaer Horticultural Society will hold its next exhibition at the Rooms of the New York State Agricultural Society, Albany, September 19th and 20th.

The Cotton Crop.—M. W. Philips, Esq., of Edwards, Miss., writes under date of July 29th last, that the cotton crop will be considerably deficient; that there had been a month of almost constant rain, and crops were injured in consequence. The corn crop, however, was expected to be good.

Transmutation.—The editor of the *Michigan Farmer* occupies *five pages* in two numbers of that paper, in advocacy of the hypothesis that wheat changes to chess. We have carefully read his remarks, but find no evidence or argument with which the public are not generally familiar—his main points having been fully discussed in the *Genesee Farmer*, sixteen years ago. He informs us, however, that he has "*scarcely yet entered upon the investigation of the subject.*" We know not, therefore, what is in reserve, but if anything of importance appears, will give our readers due notice. In the mean time we will inform the editor of the *M. F.*, that "the $100 premium," about which he inquired, *will be paid* whenever it is demonstrated that wheat turns to chess, or that both naturally grow from the same germ, or on the same stalk.

Gooseberries.—We are indebted to Mr. James Wilson, of this city, for fine specimens of the "Crown Bob" and "Roaring Lion" varieties of gooseberries.

Doyenne D'Ete Pear.—We have received a handsome sample of this pear from Dr. Herman Wendell, of this city. It is of good size, and has a beautiful mahogany color; with a flavor unsurpassed by any pear we have seen which ripens so early in the season—first week in August.

Wool.—An exchange paper states that the White River (Vt.) Wool Depot has received over sixty thousand pounds of wool this season.

Wool-Growing in Illinois.—According to the *Peoria Register*, there are 30,000 sheep in Illinois, yielding as an estimate, the present year, 90,000 pounds of wool. Bishop Chase, it is said, has a flock of 2,000; C. Stone a flock of the same size, and several others have flocks of 1,000 to 1,500, each.

Prices of Agricultural Products.

New-York, August 24, 1849.

FLOUR—Genesee, per bbl., $5.62½a$5.76—Michigan, $5 50a$5.56.

GRAIN—Wheat, Genesee, per bush., $1.25a$1.30—New Southern, $1.05a$1.25—Corn, Northern 63a64c.—Rye, 63a64c. Oats, 38a40c.

BUTTER—best, per lb., wholesale, 19a21c.—western dairy, 12½a14c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $13.50a$14.

PORK—Mess, per bbl., $10.75—Prime, $9.

LARD—per lb., 8a8½c.

HAMS—Smoked, per lb., 11c.

HOPS—per lb., first sort, 6a8c.

COTTON—Upland and Florida, per lb., 9a11½c.—New Orleans and Alabama, 9½a12½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	42a46c.
American full blood Merino,	36a40c.
" half blood do.,	32a35c.
" one-fourth blood and common,	29a31c.

Remarks.—The cotton market is rather heavy, though prices have as yet been fully maintained. For flour and meal the demand is rather moderate. In provisions the trade is fair. The wool market is firm at advanced prices.

Selling Off.

LINNÆAN BOTANIC GARDEN & NURSERY, late of Wm. Prince, deceased, *Flushing, L I, near New York.* Winter & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, the entire stock of this establishment, comprising every description including the newest and choicest varieties of

FRUIT AND ORNAMENTAL TREES,

Shrubs, vines, Plants, Roses, &c., will be disposed of at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of $10, or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by wholesale, will be supplied at such reduced prices according to kind and quantity, as will probably prove satisfactory to them.

Descriptive Catalogues gratis on application, post paid.

Sept. 1, 1849.—2t.

Mount Hope Garden and Nurseries.

Rochester, New-York.

THE proprietors invite the attention of *Fruit Growers, Nurserymen,* and *Dealers in Trees,* to their present stock now offered for sale.

By recent large importations, and an extensive scale of propagation, they have obtained a stock of nursery articles as complete as any in the country, and offer them now on the most liberal conditions.

The well known health, vigor and hardiness of the trees raised here, and the undivided and scrupulous attention given to every department by the proprietors in person, offer great inducements to purchasers.

Standard Fruit Trees.

Consisting of all the best varieties of Apple, Pear, Peach, Plum, Cherry, &c., of suitable size and age for orchard planting. The principal stock is made up of the well known leading sorts, but nearly all the new and rare American and Foreign varieties are on hand and can be furnished.

Pyramidal and Dwarf Trees,

Consisting of select varieties of Pears on Quince, Apples on Paradise, and Cherries on St. Lucie, or Mahaleb stocks, for gardens and limited grounds, and for nurserymen and others who desire to obtain fruit or test varieties quickly. Having given much special attention to this branch for many years, the stock of trees of this character, is probably the largest and best in the country.

Gooseberries, Raspberries, Currants, &c.

Of these, we have a large and complete assortment, and can supply them by the dozen, hundred or thousand, at low rates. The largest and finest English Gooseberries, cultivated and imported annually. All the new Currants can be supplied.

Ornamental Trees, Shrubs, Roses, &c.

Of these we can supply all the leading articles, such as Horse-chestnuts, Mountain Ash, Ailantus, Snowy Abele, Silver Maple, &c. by the 100 or 1000 much below ordinary rates. Besides all the popular shrubs and roses, and a large number of new and rare ones, recently imported.

Hedge Plants.

Buck Thorn, 2 and 3 years old,
Honey Locust, " "
Osage Orange, 1 and 2 years old,
Privet and other Shrubs.

Evergreens.

Red Cedar, Norway Spruce, Hemlock, Arbor Vitæ, &c., suitable for hedges, can be furnished to any extent.

Stocks and Young Worked Trees.

Pear Seedlings, 1 and 2 years, transplanted,
Plum do 2 years,
Paradise stocks, for dwarf apples—fit for working,
Mazzard Cherry, do 1 yr. old, do do
St. Lucie or Mahaleb stocks, for dwarf cherries, do
Quince stocks, sort commonly used for pears, do

New Upright Quince.

A remarkaly free, erect grower—the best of all for Pear stocks. We can now supply these in moderate quantities.

Young Worked Fruit Trees

For distant transportation, can be furnished to any extent, at very moderate prices.

Wholesale priced lists and general Catalogues sent gratis to all post-paid applications. ELLWANGER & BARRY.

Rochester, Sept 1, 1849.—1t.

Fruit Trees.

THE subscribers offer for sale this fall their usual assortment, viz: Apples, Plums, Pears, Cherries, Peaches, and Ornamental Trees.

The following Pears on the Quince.

Louise Bonne de Jersey,
Bartlett,
Virgalieu, (White and Gray,)
Onondaga, or Swan's Orange,
Duchesse d' Angouleme,
New Gray Winter Beurre,
Doyenne d' Ete, or Summer Virgalieu,
Columbia,
Bloodgood,
Vicar of Winkfield,
Beurre Diel,
Dearborn's Seedling,
Leon Le Clerc.

Also, a few hundreds of the European Mountain Ash, of an extra size. WILSON, THORBURN & TELLER,

Albany, Sept. 1.—3t. Nurserymen.

Fine Devon Cattle for Sale.

THE subscriber offers for sale a portion of his herd of pure Devon Cattle, as follows:—2 cows thorough bred, 7 and 8 years old, bred from stock imported by Richard Caton, of Baltimore, now in calf by my bull, *Young Eclipse;* sired by Mr. Patterson's imported bull *Eclipse.* Also, 2 or 3 heifers, 1 and 2 years old, and 5 bull calves, from 4 to 8 months old. All bred from choice stock.

WM. L. COWLES.

Farmington, Ct. Sept. 1, 1849.—1t.

Nurserymen's Agency,

145 Maiden Lane, New-York.

THE subscriber offers for sale,
40,000 Pear Stocks,
35.000 Quince do
50,000 Apple do
15.000 Plum do
20.000 Cherry do

Peruvian and Prepared Guano. Chemical manures, Bone dust, &c., all of the best quality, put up in packages of any size, as ordered.

Russia Mats,
Propagating Glasses—all sizes,
Flower pots, at manufacturer's prices

My services are at command, for the purchase and sale of all descriptions of Nursery stock, and for receiving and forwarding goods, &c. &c. GEO. G. SHEPPARD,

New-York, Sept. 1, 1849 —1t. Horticultural Agency.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, at Plymouth, Mass., Pear, Quince, Cherry, Plum, Apple, Paradise and Mahaleb stocks, suitable for grafting in the Spring, and for budding the coming season. Mountain Ash, Elm, Spanish Chestnut. Ash, Maple, Lime, Alder, Larch, Scotch fir, Silver fir, Norway fir, Arbor Vitæ, Balsam fir, from 1 to 4 feet; Cedar of Lebanon, Araucaria imbricata, Deodar cedar, Oaks, Althæas, Hawthorns, Lilacs, Spiræas, Syringas, Deutzias. Acacias Roses, Honeysuckles, Climbers &c. Raspberries, May's Victoria and other currants, Gooseberries, Native grapes, Foreign grapes in lots for vineries. Myatt's Victoria, Early Scarlet, and other rhubarbs. The best native and foreign *Pears*, 1 to 5 years from the bud, fine thrifty trees and well grown. 40 Select named Verbenas, all of Beck's Pelargoniums, in 23 varieties, including those of last season, being the finest Pelargoniums ever introduced.

Priced Catalogues sent on application.

Sept. 1, 1849.—3t. B. M. WATSON.

Nursery of J. J. Thomas,

Macedon, Wayne Co., N. Y.

THIS nursery now contains many thousand fine trees, of large, handsome and thrifty growth, consisting of Apples, Pears, Cherries, Peaches, Apricots, &c., and the smaller fruits, of the best standard sorts, and most of the finest new varieties; ☞ *in all cases they have been propagated for sale after being thoroughly proved in bearing* ☜

The collection of APPLES, consisting of many thousand large trees, mostly 7 to 9 feet high, embraces the finest standard varieties, and nearly all the valuable new sorts.

Very fine pear seedlings, at $12 per 1000, two year old apple seedlings, at $5 per 1000, Horse chestnuts 1 to 2 ft high at $5 per 100, &c., &c.

When purchasers desire, selections of the best for affording a regular succession of fruit throughout the season, will be made by the proprietor

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y. Sept. 1 —2t.

Strawberry Plants.

THE subscriber offers to Nurserymen and others, requiring large quantities of Strawberry Plants, the following varieties. To those who buy to sell again, a discount will be made of 33 per cent.

Hovey's Seedlings,	per thousand.	$10 00
Crimson Cone,	do	10 00
Early Scarlet,	do	10 00
Boston Pine,	do	10 00
Burr's New Pine,	per hundred,	4 00

Plants will be ready for delivery by the middle of September.

Flushing, L. I., Sept. 1.—1t. G. W. HUNTSMAN.

Hamilton Nursery.

THE proprietor of this establishment confines himself wholly to the propagation of hardy Fruit Trees, all of which have been obtained from the most reliable sources, or cut from bearing trees of well known varieties. About sixty varieties of plums and a large quantity of the Apples have been proved on his own grounds, and all are cultivated with his own hands, assisted by his son, who is soon to assume a personal interest in the business. And all the cutting of buds or grafts, and the labeling of trees, with the oversight of taking up and packing, being done by him in person, he feels confident of being able to give as good satisfaction as to correctness, as can be given at any other nursery. The stock of apples is large, and embraces numerous varieties, so that the Fruit Grower and Amateur Horticulturist can each be supplied

A liberal discount to nurserymen and dealers in trees.

Seedling stocks of Apples and Plums for sale.

AGENTS.—Geo. G. Sheppard, 145 Maiden Lane, New-York, H. L. Stephens, Honesdale Pa., Wm. J. Hamilton, Ringwood, McHenry Co., Ill

Catalogues sent gratis to all *post paid* applicants.

Canterbury, Orange Co, N. Y. CHARLES HAMILTON.

Sept 1.—2t.

JUST PUBLISHED,

BY DERBY, MILLER & CO., AUBURN,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A GREATLY enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain

THREE HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence. the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole making a handsome duodecimo volume, *of over 400* pages, at the low price of One Dollar.

DERBY, MILLER & CO.

Auburn, Sept. 1, 1849.—1t.

John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Sept 1, 1849.—tf.

Centrifugal and Centripetal Churn.

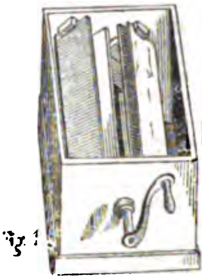

Fig. 1.

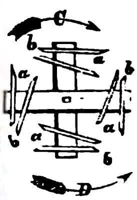

Fig. 2.

AMONG the numerous inventions, &c. of the Churn, the annexed cut represents the only one which has thus far deserved an introduction. It is a recent invention, and for which letters patent have been granted. It is made and offered the public on trial, with our best guarantees of its giving satisfaction.

Description.—Fig. 1. The churn as it appears with the cover off. Fig 2 The head of the dasher or floats which is in one piece and can be instantly removed from the churn—and has no iron rod running through, as in most crank and cylinder churns.

When the crank is turned in the direction of the arrow, C the cream is forced through between the three flat broad floats, passing in at *a*, and escaping at *b*. This process is continued until the butter forms into lumps so large as not to pass through, when the crank is reversed, thereby throwing all the milk, cream and butter into the middle of the churn—caused by the angular pitch of the inner float, thereby quickly gathering the whole mass into one roll of butter.

From the repeated trials had with it, and the uniform success attending its use, we do not hesitate to recommend it as being well worthy attention and trial.

Sizes and prices will be published in a succeeding No.—They will not exceed that of the common cylinder churn.

Albany Agricultural Warehouse.
369 & 371 Broadway, Albany.

Sept. 1. H L. EMERY.

A Small Farm Wanted.

A Letter addressed to C. S, Newport, N. Y., will receive attention.

August 1.—2t. *

Syracuse Nurseries.

Thorp, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of *fruit trees* alone. embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and *youthful* growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated NORTHERN SPY, *from seven to nine feet in height*, which they will continue to supply, as heretofore, in an assortment with others, at the *same rate*. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the *Hawley*, the *Green Sweeting*. the *Ladies' Sweeting*, *Peck's Pleasant*, *Swaar*, *Baldwin*. *Spitzenburg*, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the *Onondaga*, *Oswego Beurre*. and *Van Mon's Leon Le Clerc* Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "*first rate*" Persons desiring to buy at *wholesale*, can be supplied on the most liberal terms. and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters. they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flatteringly bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by *post-paid* application to the proprietors.

August 1.—3t.

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July.) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* GARDENING, *in a thoroughly practical as well as scientific sense.*
2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*
3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*
4. *To* RURAL ARCHITECTURE, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c, &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

All readers who have the least interest in rural affairs. should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators. and it is scarcely necessary to repeat, that Mr. DOWNING's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect Their effects are already seen in every part of the country, in improved cottages. gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser*.

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Saxon Sheep.

THE subscribers having disposed of their pasture lands, now offer their entire flock for sale. They will also offer about 70 Bucks and Buck Lambs at auction, at Syracuse, on Wednesday or Thursday, the 12th or 13th of September next, on the grounds of the State Fair. Of time, due notice will be given

New Lebanon, N. Y., July 13, 1849. TILDEN & CO.

We refer to,

H. Blanchard & Co., Kinderhook Wool Depot.
Samuel Lawrence, Esq., Lowell.
Sanford Howard, Esq., Albany.

August 1.—2t.

Sale of Hereford Cattle.

THE Messrs. BINGHAM, of Vermont—brothers—propose to sell at public auction, on the Show Ground of the New-York State Fair at Syracuse, from ten to twenty head of Hereford Cattle, 3 years old and under—bulls and heifers. Our cattle -Herefords—to found our herd, were purchased of Messrs. Corning and Sotham, about three years ago. We have been disposed to give these cattle a fair trial, to see what their merits would prove to be, before offering them to the public. We have come to the conclusion that no race of cattle can compete with them when all their good qualities are taken into consideration. We are resolved to push ahead in the cultivation of the Herefords as being a race, affording the best profits for keep and care, and proving themselves first class cattle for all the purposes of the breeder They make a noble cross with the Durhams or their grades, as well as with the native stock, showing a great and decided improvement. We offer these cattle to the public with the strong conviction that they will prove a desirable acquisition to any herd.

PURE BRED MERINO SHEEP.

We shall also offer at private sale. a large lot of pure bred Merino Sheep, from imported sires. The breeders of sheep will do well to look over our flocks, before purchasing elsewhere. We sell no mongrels, or grades. or worthless sheep for great prices;—but we mean to deal fairly with those who purchase of us, and sell them our best blooded sheep. at fair remunerating prices—so that they shall prove a decided improvement to the flocks with which they may be placed.

August 1.—2t.

Hereford Bull.

FOR sale by the subscriber, a full blood Hereford Bull, from the herd of Messrs. Corning & Sotham, Albany, N. Y. Said bull is six years old, and for symmetry of form, size, and the thrift and excellence of his stock, is probably unsurpassed by any bull in the State. J. P. FAIRBANKS.

St. Johnsbury, Vt, Aug. 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation. and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been. to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled the more so, as its manufacture is not of the most agreeable kind and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain. and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels. or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances. as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company. at their office, 78 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

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School of Applied Chemistry,

Yale College, New Haven, Ct.

B. Silliman, Jr., Professor of Chemistry applied to the Arts.
J. P. Norton, Professor of Agricultural Chemistry.

THE Laboratory in this department is open during nine months in the year for instruction in the analysis of soils, minerals, ores, &c.

During the summer and autumn terms, there will be lectures on Mineralogy, Geology, Natural Philosophy, Elementary Chemistry, and other useful branches of Natural History.

The annual course of lectures on Agricultural Chemistry, by Prof. Norton, will commence soon after the middle of January, and continue till about the first of April, at the rate of four or five lectures in each week.

These lectures are intended to be delivered in a form quite intelligible to those who never turned their attention to chemical studies. The great principles of Improved Agriculture will be illustrated and explained during the progress of this course in such a manner as to be understood by all. Tickets for the course $10.

Students in the laboratory have glass, chemicals, balances, and other apparatus furnished, and pay $20 per month. Analyses of minerals, soils, &c., made on reasonable terms.

For further particulars apply to either of the Professors.

New-Haven, Ct, Sept. 1, 1849.—5t.

Farm School.

THE *Mount Airy Agricultural Institute* will commence its winter session on the first Thursday of October next.

The course of instruction pursued is such as to insure to the student a thorough knowledge of the *Natural Sciences*; collateral with a full practical course on the farm, in all the labor of which the students participate.

For further particulars address the Principal.

JOHN WILKINSON,
Germantown, Pa.

Sept. 1, 1849.—2t.

Albany Steam Mill.

THE subscriber begs leave to announce to his friends and the public, that he has opened a store, No. 9 Hudson street, for the sale of Flour, &c. Having erected a Steam Mill on the premises, enables him to furnish the following articles, fresh ground, at all times, viz: Graham, Rye, Buckwheat and Rice Flour. Wheat Grits, Farina, Pearl Barley, Split Peas, Corn meal and Hominy of all sizes, from North Carolina and Northern corn. Also, a very superior article of steam refined Table and Dairy Salt. A share of patronage is earnestly solicited.

C. N. BEMENT

Albany, Sept. 1, 1849.—1t.

White Dorkings.

THE subscriber has on hand, a few choice White Dorking fowls which he will sell at fair prices—bred by himself. As far as his knowledge goes, this variety of the Dorkings is more sought after, both in England and in this country, on account of their color.

L. DURAND.

Derby, Ct., Sept. 1, 1849.—2t.*

Allen's Improved Railroad Horse Power, &c.

GENTLEMEN—In reference to H. L. Emery's advertisement page 264 of the last number of *The Cultivator*, we can only say, that we think our Railroad Horse Power, Overshot Thresher and Separator quite equal in the principles of its movement to Wheeler's, and stronger and better made than any ever manufactured by its patentee. And furthermore, we are willing to refer the merits of the two machines to the decision of any disinterested committee of mechanics and farmers to decide the question.

We have never sold our machines except upon their own merits, and at the same time stating distinctly to the purchasers what they were; we have also done the same by Wheeler's, and still do so. If H. L. Emery means in his advertisement that we have done the contrary, he asserts what is untrue. We utterly scorn any thing of the kind.

Very respectfully yours.

A. B. ALLEN & CO.,
189 & 191 Water street, New York.

To the Editors of The Cultivator,
Albany, N. Y.

Sept 1, 1849—1t.

Wheelers's Patent Railroad Horse Powers and Threshing Machines.

THE subscribers having been appointed agents for selling the above celebrated machines for the city and vicinity of New-York, in place of A. B. Allen & Co., (who have heretofore had the sale of the same,) they solicit the attention of those wishing to purchase.

☞ The farmers of Long Island can be supplied with a machine equally well adapted for their use, and which is afforded at the same prices, without any extra charge for premiums or Patent rights. All are warranted to give satisfaction, or are subject to be returned and the full purchase money refunded. A supply constantly on hand at their Warehouses, Nos. 187 Water Street and 196 Front St., New-York.

JOHN MAYHER & CO.

Sept 1.—tf.

Mediterranean Wheat.

200 BUSHELS of this variety of Wheat for sale, being a portion of an excellent crop of Winter Wheat, raised for the fifth year on the same farm in Greene county, N. Y.

It is two weeks earlier than the Hutchinson wheat and is always harvested before the Rye crop is ready for the sickle. This season it has done better than heretofore, notwithstanding it has improved in quality and yield.

The grain is large, of light color, and weighs, (this crop through) 64 pounds per bushel. It has never been affected by the Weevil, (or wheat midge,) Fly or Rust. This season, the yield was [illegible] bushels to each bushel sown.

For sale at the Albany Agricultural Warehouse & Seed Store.
Nos. 369 and 371 Broadway, Albany, N. Y.

Sept. 1—2t.

By HORACE L. EMERY

Horses for the State Fair.

IT is my present intention to visit the Agricultural State Fair, to be held at Syracuse, on the 11th, 12th and 13th days of September next, and take with me for exhibition, my Morgan stallion, a colt of the old Gifford Morgan, 6 years old, chestnut color, very closely resembling his sire. Also, one or two blooded mares of the Morgan stock.

C. BLODGETT

Chelsea, Vt., Sept. 1, 1849.—1t.*

Merino Sheep and Devon Cattle.

THE subscriber will offer for sale at the New-York State Fair, at Syracuse, about 100 rams, of pure Merino blood—as bred by himself. Also, several head of Devon cattle—bulls, cows, and heifers.

JACOB N. BLAKESLEE

Watertown, Ct., Sept. 1.—1t.

Devon Cattle for Sale.

I OFFER for sale, a Devon bull and cow, four years old, from the celebrated herd of George Patterson, Esq., of Maryland. Finer specimens cannot, probably, be found anywhere—certainly not in the West. I will sell them, here, at the same price Mr Patterson asks for similar stock at his farm in Maryland. The cow has a bull calf by her side.

ISAAC DILLON

Zanesville, Ohio, Sept. 1, 1849.—1t.*

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, OCTOBER, 1849. VOL. VI.—NO. 10.

Practical Husbandry.

Farming on Long Island.

Local circumstances must always have an influence on the course or system of farming adopted in any particular district. The relative demand and value of products, together with the facilities for production, must govern the farmer in the selection of crops for cultivation. The near proximity of large cities and towns, may render it profitable to cultivate articles, which, in neighborhoods remote from market, would be comparatively valueless. The rapid increase of consumers of agricultural products, in some parts of our country, is constantly changing or modifying the course of farming in those sections; and this influence is being more and more extended with the extension of the means of rapid and easy communication with the interior. Perhaps there is no part of the country which has been more affected by the late great improvements in intercommunication, than a large portion of Long Island. A view of the mode of farming now practiced in one of the most important counties of that section, is admirably given in an address delivered before the Queens County Agricultural Society, by Hon. JOHN A. KING, President of that Society, and now President of the New-York State Agricultural Society. We think our readers will be interested with Mr. K.'s remarks. EDS.

GENERAL HISTORY OF THE COUNTY.—I propose, in the remarks I am about to make, to depart somewhat from the course which has been usually adopted by those who have addressed this Society, and instead of treating of the subject of agriculture generally, I propose to confine what I have to say, principally to the county of Queens, the middle county of the Island upon which we live. Before, however, I enter upon the character of its soil, the course of tillage, and the application of manures to its varied crops, I would for a moment digress, and give a brief account of the position, settlement and climate of Queens county, stating at the same time, that most of the information and facts relating to these questions, are derived from the several histories of Long Island, and from the recent Geological Survey of the same, under the authority of the State, by Wm. W. Mather. Long Island then, by its position, its climate, the character of its soil, and the thrift and industry of its inhabitants, is a remarkable portion of the State of New-York. It lies on its southern extremity, between the 40th and 41st degrees of north latitude, and forms, with the Island of Manhattan, Staten Island and the Jersey shore, the noble harbor of New-York. It is in length, from Fort Hamilton, at the Narrows, to Montauk Point, about one hundred and forty miles; and from the Narrows to Peconic Bay, a distance of ninety miles, it varies in breadth from 12 to 20 miles. The first successful attempt by the English to settle Queens county, was made in the town of Hempstead, in 1643, by emigrants from New England, at whose head was the Rev. Richard Denton. Flushing was settled in 1645, under Thomas Farrington and others. Newtown by Englishmen in 1651, where the present village now stands; and the first patent or ground brief, was granted in 1652, by Governor Stuyvesant. Thomas Stevenson and his associates were among its first settlers. The first plantation in Oysterbay, was commenced on the site of the present village of that name in 1653, by Englishmen, and the first deed from the Indians for land in that town, was made in 1653, to Peter Wright and others. Jamaica followed in 1656, upon the application of Robert Jackson and others from Hempstead. Robert Coe and his associates signed the first certificate of purchase Nov. 25th, 1656, for the settlement near the Beaver Pond, under a purchase from the Indians, and a grant from the Governor and Council of 21st March, 1656. North Hempstead was originally a part of Hempstead, and has no distinct records earlier than the year 1784. A settlement was attempted, at what is now Manhassett, in 1640, by a company of emigrants from Lynn in Massachusetts, but was broken up by the Dutch Governor Kieft. It will be perceived from the above statement, that the county of Queens is among the earliest settlements in the State of New-York. Its length from east to west is 26 miles, its breadth from north to south about 16 miles, making its whole area or surface 396 square miles, or 250,000 acres.

The influence of the ocean, which bounds it on the south and east, mitigates and tempers, both in winter and summer, the cold and the heat; so that the thermometer rarely falls below zero, or rises above 90. Of the 250,000 acres, the area of its surface, about 25,000 are salt meadow, and 25,000 plain and common lands, leaving 200,000 acres of land for cultivation, improvement or in wood. Its present population may be estimated at 32,000; and the assessment roll of its real and personal property, reaches nearly $12,000,000. Considering, then, the agricultural character of its inhabitants, their numbers, the size of the county, one of the smallest in the State, yet, the value of its land, and prosperity of its farmers, place it, in point of taxable property, the sixth or seventh in the State. Large as is this amount of property, in a county of such limited extent, and whose population is almost exclusively agricultural; yet I think it can be clearly shown that a full remuneration for the capital and labor expended in the cultivation of its soil, is annually received, and in many instances profitably invested, and that this steady return and increase, is as much due to the thrift and industry of those who till the soil, as to the character of that soil, and the variety of its products. A ridge or chain of hills commencing in Kings county, and extending nearly to Oyster Pond Point, on the northern fork of the Island, and rising in one or two places, to nearly 400 feet in height, divides the county into nearly equal parts. On the north side of this ridge, the land is often rough and broken, except where it stretches in necks and headlands into the Sound, while the surface on the south side is nearly a plain, without rock or stone of any size. The soil of the Island, and of this county, has as much variety as its surface. Near the Sound, the land is hilly and uneven; the greater portion however, is either level or slightly undulating. The necks and headlands have generally a rolling surface, and a deep loamy soil slightly mixed with sand. On the south side of the hills, the surface is flat and the soil sandy, mingled in many places with loam and clay. The more elevated land is, in soil, superior to that of the plains, and better adapted to the growth of the grains usually raised in this climate. There are large tracts of land and woodland in the centre of the Island, which, until recently, have remained without any attempt to reduce them to cultivation. In this county we have a large body of land principally belonging to the town of Hempstead, which still lies in common, but is susceptible of being easily and profitably tilled, notwithstanding an immediate and considerable outlay is required for fences and manures. Kings county contains very little waste land, and is in the aggregate, more fertile than any equal portion of the Island. Perhaps this is, in a great degree, to be accounted for, as much from the excellence of the soil, as from its proximity to the cities of Brooklyn and New-York, from whence manures of various kinds can be more cheaply and easily procured.

System of Husbandry.—With these preliminary remarks respecting the general features of the Island, and the county of Queens, which I trust may not be deemed inappropriate to the subject in hand, I will proceed to describe in the best way I can, the system of husbandry, which is pursued in this county. It must be in the recollection of many, who are here present to-day, that the general course of cultivation was formerly, in many essential particulars, different from its present practice. Before the Erie canal was completed, wheat, and barley, and rye, were largely raised for sale, and the flouring mills on the Island had as much business as they could attend to; the quality of the grain raised was excellent, and the reputation of the mills on the north shore was well established for the quality of their flour. The construction of that great work of internal improvement, very soon caused a radical change in the husbandry and crops of the county. We could no longer compete with the rich and virgin lands of the west, in the production of the cereal grains; and it was at one moment feared that the value of our lands, and the prosperity of our farmers, would be seriously affected by the cheapness, fertility, and great extent of the western lands. Such, however, was not the case. The effect of opening the Erie canal, was, it is true, to bring the crops of the West into immediate competition with those of the older parts of the State, which, so far, had enjoyed a monopoly: and at the same time to force those sections, particularly those near to the city of New-York (for as yet, Brooklyn was only a village) to change their system of husbandry, and the course and character of their crops. And the farmers of the western part of Long Island, with that unerring sagacity which interest always prompts, quickly adapted the cultivation, and the crops, to the new and more extended demand which the increasing and varied wants of a great and rapidly growing city could not fail to produce. The natural and predicted consequence of the opening of the Erie canal, was first to enlarge and enrich the city of New-York, by pouring into her warehouses, for consumption and export, the immense and increasing harvests of the unlimited West; still to be multiplied as they have been, year by year, until by new and improved channels of communication, the borders of all the great Lakes now receive and distribute the overflowing productions of regions as vast, and as fertile, as the sun in its daily course, blesses with its glorious beams. The greater part of this annual tribute of Agricultural wealth, finds its way to the noble seaport of our State—the great commercial mart of the Western continent; thence to be distributed among those Atlantic States whose productions are of a different character; and also, among the countries of the world, in exchange for the productions and the fabrics of their skill. The result and effect of these new and varied elements of wealth poured into the city of New-York, was immediately felt, in the extension of her commerce, the increase of her population, and in the enlargement and improvement of the city itself. This impulse, so powerfully felt by the city, was soon communicated to the surrounding country; and as the number and means of the citizens increased, the demand for those productions which the farmers in its neighborhood could alone most easily and profitably supply, was soon greatly augmented. Hence, as the growth of New-York, and subsequently of Brooklyn, continued to increase from the causes above alluded to, it followed as a consequence of so many being devoted exclusively to the commerce and the trades connected with it—and all consumers of what another class could alone produce—that the lands in the immediate vicinity of these cities must advance in value—first, for the erections of houses and buildings, and next for the cultivation and supply of those articles most needed from day to day for the consumption and support of two large cities. And such must continue to be the course of improvement, and the increasing value of the lands in the western part of this Island, as the cities of New-York and Brooklyn shall continue to prosper and augment. The system of husbandry in this part of the Island, and reaching to the eastern towns of Queens county, has, as was before stated, are as a natural consequence of our position and soil undergone a great change in the character and value of its productions. Formerly wheat, rye, oats and corn, were the staple crops, and to a certain extent, some of them still continue of that character. Now, it may be said that wheat, and rye, and barley, are no longer raised as staple crops, nor to the extent of former years. But corn, and oats, and hay, are now the main and, as farming crops, perhaps the most productive and the most relied on. Potatoes, cabbage, peas, beans asparagus, tomatoes, and other vegetables, in those parts of the county most conveniently situated for that purpose, have been largely cultivated for market, and two crops are now not unfrequently taken during the same season, from the same piece of ground; thus bringing a double return to the farmer for his labor and expense. On the south side of the Island, where the soil is light, sandy and warm, all the early vegetables and small fruits have, with the aid of ashes and manure, been grown with great success and advantage. And there, too, within a few years, large orchards of peach trees have been planted, whose fruit has been abundant, fair, and finding a ready market; while the stronger and more loamy soils in the centre, and on the necks and headlands of the north side, have, by a similar process of high cultivation, been rendered productive of the finest crops of corn, oats and hay; and where lands are finally laid down to grass, of excellent crops of wheat, rye and barley. But it should always be remembered, that while on the one hand, the sureness of a great and steady market has afforded the inducement, and stimulated the exertions of the farmers of the western part of the Island; yet on the other hand, they with great sagacity and persevering industry, have been quite equal to the new system of husbandry, which in so many instances they have been called upon to enter into. And that though prudent and saving in all other matters, they have learned the wise lesson that it is not for their interest to starve the land. It

It has been truly said, you cannot cheat the land, for it will reproach you if you do. Another maxim, which I believe is held for truth among us, is, that the more generously you treat the land, the more abundantly it will repay the outlay.

Rotation of Crops and Manures.—I will now proceed to say a few words upon the general rotation of crops on regular farming lands, and the application of manures to the various crops, as they come in their assigned order, from my own observation, as well as from the report of others. It may be stated that the lands in Queens county, as a general rule, are broken up every five or seven years; that corn, one of the surest crops, succeeded by oats, are the two fallow crops, and that the land is then laid down with wheat, rye or barley, and the grass seeds. It is mowed two or three years, and pastured afterwards, until it is time to repeat the same process. The manner of applying manure, ashes, lime, &c., which are those chiefly relied upon, and used in the cultivation of the various crops—(though guano bone and fish have their advocates) depends, as to their quantity, upon the condition and character of the soil, and the nature of the crop to be cultivated. While nearly all the straw, and more than half the hay, is carried off the farm and sold, and their place only measurably supplied by salt and sedge hay, the quantity of manure made in the barn-yard, must necessarily be much diminished, and its deficiency supplied, if the system of frequent cropping is carried on, from other sources. Hence Long Island, in all its length and breadth, particularly in its western counties, depends essentially upon a supply of the richest manures, from the cities and towns on the North and East Rivers, which is brought by water and railway to the nearest points where it is required; and the farmers of this county proceed, and have proceeded for years, upon the principle that it is better and more profitable to sell the corn and oats, the straw and the hay, for cash in the market, and with it, to purchase the manures required for the growth of their crops, and the maintenance of their farms in good condition.

In breaking up the land for corn, they do best who plow in the fall, and cross-plow in the spring, spreading the whole ground with such manure as they may have, and then adding at the time of planting in the hill, half a shovel full of well-rotted manure. By this process a quick start is given to the plant, leaving it afterwards to draw its support from the soil around, in which the long manure is slowly decomposed, and continues to supply nourishment to the plant during the period of its growth. Others manure the corn in the hill only, and sometimes, when it is up, and of sufficient size, strew a little leached or other ashes, around the young plant. As it is a certain, so it is a general crop, yielding, according to cultivation and manure, from twenty to eighty bushels per acre. For oats, it is not usual to give any manure; sometimes, however, ashes are applied, where the nature of the soil is supposed to require it. But usually it is a crop which is grown free from any other charge, than putting the ground in good condition by the plow, and an early sowing of the seed. As soon as the oats are cradled, or as soon thereafter as the ground will admit of it, the land is slightly plowed, so as to cover the stubble sufficiently, in which state it remains until it is time to mark it out, and cart on the manure and ashes, as both are frequently applied together where the character of the soil would seem to indicate the propriety and advantage of their joint use. The quantity of manure, and of the best quality, which at this time is put upon each acre, will vary from 30 to 40 cart loads; with an addition sometimes of 100 bushels of ashes. Between the end of September, and the first ten days of October, the wheat is sown at the rate of two bushels an acre, with from six to eight quarts of timothy seed; and as early in the spring as the state of the weather and of the ground will admit, about eight or ten pounds of clover seed are sown per acre. From land thus laid down, if the season is favorable, from twenty to twenty-five, and in some instances, thirty bushels of good wheat will be harvested; of rye, from twenty-five to thirty bushels; of barley, from 40 to 50 bushels. If the grass seeds take well, from two to two and a-half tons of hay may be cut on the ensuing year. The labor of tillage in this county is, generally speaking, comparatively light, and hence a less number of animals are needed for the purposes of a farm. A pair of horses, mules, or cattle, have, with some few exceptions, power enough to turn up the sod with ease, and to prepare the land for a crop. And with the aid of the same horses and mules, where the farm is near enough to the cities the farmer is enabled himself to transport his produce in wagons or carts to a ready and a cash market. So far as my own experience and observation can be relied on, and they are sustained by the opinion of many practical agriculturists, deep plowing for corn and potatoes, where the land will admit of it, is a practice which if more frequently followed, would well repay the farmer. But if you plow deeply, you should manure generously, and by the aid of both you will increase the depth and excellence of the soil, in which the roots of plants will find room to spread, and find protection from the extremes of heat and cold. The amount, the variety, and the value of the productions of Queens county, can only be estimated and measured by the census of 1840; the only means at this time within our reach for such a purpose. By the returns of that census, the number of improved acres of land in the county was 125,636, of which there were in grain 49,906, and in meadow and pasture, 73,710, whose annual products of all kinds reached the value of $1,764,604; agreeably to a statement and calculation, which will be found in a note below.*

There is another source of profit, which I must not omit on this occasion, and in connection with the foregoing statement. It is the large and valuable nurseries, and horticultural and botanical establishments, which for so many years have given celebrity to the county, as well as to their enterprising and intelligent proprietors; who cultivate about 200 acres, on which nearly 2,000,000 trees are supposed to stand.

The above sum of $1,764,605, the gross value of

	Acres.	In Grain.	Meadow & Pasture
* Newtown,..........	12,397	5,403	6,994
Jamaica, ...	11,098	4,106	6,992
Flushing, ...	11,688	4,541	6,127
North Hempstead,.....	23,580	11,791	10,789
Oysterbay,............	35,995	10,192	25,803
Hempstead,...........	29,878	12,873	17,005
	125,636	49,906	73,710

	Acres.	Total bu.	Bu. pr. acre.		Value.
In Wheat,......	4,464	99,374	20	at 10s.	$124,217
Corn,........	17,228	440,200	25	5s.	275,125
Oats,........	12,148	323,824	27	3s.	121,434
Potatoes,.....	2,435	229,966	95	4s.	114,983
Rye,........	[illegible]810	61,682	11	5s.	38,552
Buckwheat,..	[illegible]17	67,567	15	4s.	33,783
Peas,........	617	38,249	62	4s.	38,214
Beans,.......	299	26,796	90	8s.	26,796
Of the 75,000 acres in meadow and pasture, two-fifths, or 30,000 acres, may be set down as mowing ground, yielding, one year with another, one and a-half tons of hay, or 45,000 tons, at $12.50 per ton, is,........					572,500
Wheat and Rye straw, one-half the value of the grain,					82,000
Salt and sedge hay, at one-fifth the value of English hay....................................					112,000
Oat straw, corn tops and bottoms, 40,000 loads at $1.50,					60,000
Cabbages, asparagus, and other vegetables, and small fruit,..					50,000
Pork, poultry, lambs, veal, eggs, butter, milk, cord wood, and locust timber,............................					125,000
					$1,764,604

the annual productions of the country, is now to be diminished by the cost of labor and manure, and the wear and tear, as follows:

To the value of the real estate,	$7,500,000
Deducting for villages and their buildings,	1,000,000
	$6,500,000
Add to the personal estate, for stock, farming implements, wagons, carts, &c.,	1,500,000
	$8,000,000

The balance of personal estate, $3,000,000, being at interest, or variously invested.

Deduct, for labor on 50,000 acres arable land, at $6 per acre,	$300,000	
And on 30,000 acres meadow or mowing land, at $3 per acre,	90,000	
For manures made and purchased, the one being equal to the other, as will be shown,	454,000	
For wear and tear,	80,000	
		924,000
Nett receipt,		$840,605

Or more than 10 per cent. on $8,000,000 of agricultural capital; or $7 nett per acre on 125,000 acres improved lands, and $17 nett per acre on the 50,000 acres of arable land.

The average size of the farms will scarcely reach eighty acres, and the average value of all the lands in the county, 250,000 acres, is agreeably to the assessment roll, $30; of the improved land, 125,000 acres, $60 per acre; of the number of acres returned for taxation, 170,000, $47 per acre. The number of acres of improved land in the state is 12,000,000. Its hay crop is 3,000,000 tons, or rather more than one-quarter of the whole hay crop of the United States. In the year 1825, the Erie canal was completed. At that time the population of the city of New-York was 166,000, and the value of her real and personal property, $100,000,000. Then the county of Queens had 20,000 inhabitants, and an assessment roll of less than $6,000,000. In 1848, the city of New-York had a population of more than 400,000, and an assessment roll of $250,000,000; and the county of Queens, a population of 32,000, and an assessment roll of nearly $12,000,000. It is thus, I think, clearly shown, that the growth and influence of great cities, and the congregation of great numbers who are not producers, but must be fed, ever has been, and ever will be the source of increased value to the lands within a reasonable distance, and of profit and emolument to those who are owners or tillers of the same.

Annual Expenditure for Manure.—It remains now to be shown what sums are annually spent independently of labor, for the manures, ashes, lime, &c. An attempt has been made to form an estimate which should be safe, upon this subject, and some pains have been taken to get at the details, in which I have been aided by several intelligent friends; and the result is as will be seen below, that an annual sum of $227,000 is expended for the purchase of manures.*

This calculation is supposed by many to be below the actual outlay for manure, taking one year with another; and I have heard it suggested as a curious fact, or rather conjecture, that large as is this amount, an equal amount in value is annually received from the sale of the fish, clams, oysters and wild fowl of our Bays and Sound.

This estimate, while it is to be considered only as an attempt to fix the amount of outlay annually incurred by the farmers of Queens county for the materials to enrich their soil, furnishes at the same time the best evidence, that the profits of agriculture must be large and remunerating, in order to induce the farmers, who always look closely to their own interest, to expend annually so large a share of their receipts for such a purpose.

If, then, to the above sum of $227,000 expended for manure, be added the amount of that made on the land, estimated according to the English calculation at so much per head of the animals of the county, viz., cattle and horses at 13 cart loads, cows at 10, and sheep and swine at 1¼, it will be found that about 460,000 cart loads of manure at 4s., are annually made, equal in value to that procured from all other sources; 75,638, being the number of animals by the census of 1845, which calculation gives 6 loads per head all round.

It will be perceived that I have not entered into the field of chemical analysis as respects the soil or the manures to be applied to it; this has been done by others, on former occasions; and is a subject now within the reach and understanding of all, from the cheap and numerous treatises upon the subject. I have confined my remarks to the practical view of our agricultural condition and capabilities, and have endeavored by a plain statement of facts as they are believed to exist, to give to those most interested in the prosperity and welfare of the county, such details respecting its soil, its husbandry, its products, and its prospects, as may encourage them and others to pursue, with diligence and profit, the most independent and healthful occupation that man can exercise. The state of New-York, ever mindful of her own commanding position, was the first to commence the great work of internal improvements, and well has she been repaid for her wise forecast. Having provided the channels of communication, upon which might be borne the products of her own, and those of other states, she then expended a large sum of money, during a series of years, in the Geological Survey of the State; copies of which great work were distributed among the counties, at the cost price. She went one step farther; for, remembering that agriculture was the occupation and support of the great mass of her people, she appropriated an annual sum of $8,000 for the improvement and encouragement of agricultural and domestic manufactures, a portion of which is paid to the several counties of the state, upon their raising an equal amount.

Having now concluded the remarks which I proposed to address to the society, and which I feel have but poorly rapaid your patient attention, it remains for me only to exhort the farmers of this old county to a steady perseverance in their honorable occupation; which has so far rewarded their toil and industry with competence and independence. May they properly estimate and approve of the provision which the state has thought proper to make for the promotion of the great cause in which they, and their brethren throughout the length and breadth of the land, are so steadily engaged. The benefit and advantages of which have again and again been made manifest both at the state and county fairs. So much so, that it is now a matter generally conceded, that inquiry and exertions have been stimulated, a more perfect system of cultivation pursued, a great improvement in all the implements of husbandry obtained, the breed of cattle and horses carefully attended to; and finally, an accurate knowledge of the component parts of soils, as well as of the qualities of manure, placed within the reach of all. In all these matters the farmers of the state have a deep interest. They constitute the great mass of its inhabitants, are constantly and laboriously employed in the cultivation of its soil, the gathering of its crops, and their transportation to the best market. An occupation as honorable and useful as it is ancient and necessary; and too much neglected by the youth of our country for other and more uncertain pursuits; one, too, in which the passions and the worst feelings of our nature find little room for growth or display, where the regularity of labor, the comforts of life, and the feeling of independence, which the ownership of the land ever imparts, tempers and chastens the character and sentiments of the tiller of the soil. Such is eminently the condition and the lot of the farmers of this noble state: may such continue to be the inheritance of their children.

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* At the landings of the town of North Hempstead, there was received from the 1st of July, 1847, to the 1st of August, 1848—
59,200 cartmen's loads of manure,
147 tons of guano,
3,800 loads of ashes,
1,800 loads of lime,
1,500 bushels of bone,
30,000 bony fish.
The value of which was, ... $47,878
The Long Island Railroad transported, during the same period, and principally for this county,
14,000 loads of ashes,
25,000 loads of manure,
16,009 bushels of lime,
Value, independently of guano, bone and bony fish, ... 42,371
$90,249

If the 10,000 acres of arable land in North Hempstead require, in addition to that supplied by their own barn-yards, an outlay of nearly $50,000 a year for manure, Oysterbay, whose cultivation is about equal in amount, and, if as perfect, would also require an equal outlay, ... [illegible]
Flushing, with about one-half the number of acres, ... [illegible]
Newtown, with rather more than half, ... [illegible]
Hempstead, with 12,700 acres, would require a larger outlay than the towns already named; but, as she has other sources of supply, near at hand, from sea-weed and fish, I would not place her outlay beyond, ... [illegible]
Jamaica, with about 4,000 acres requiring the aid of manure, a part of which is supplied by the L. I. Railroad, as is also that part of its line of road through the several towns of the county, may still be put down at an outlay of [illegible]
Making together the sum of ....[illegible]

System, Order, and Economy.

The farmer of the state of New York is deprived of the many and necessary facilities for studying, comprehending, and intelligibly practicing his profession. The farmers of the state of New York contribute more to the due education and accomplishment of the ministers of religion, of lawyers, physicians and merchants, by full three fourths, than either of the above classes do or can contribute for their own advancement, because when combined they even then do not amount in numbers to one fourth of the farmers of this state. We farmers, then, pay for the establishment of schools and colleges, of academies and universities, the energies of which are mainly exerted and directed to educate and advance the classes above referred to; and from them emanates special appliances for their respective individual classes. The farmer has reason to rejoice and feel proud of the benefits he is thus so largely instrumental in producing; he knows, acknowledges, and bows to, the efforts of the man of God, who meekly and purely devotes himself to the guidance of his fellow beings in the only path which leads to true and enduring happiness. The farmer has a proud satisfaction, too, in the means he has so richly afforded in bringing forward the eminent lawyer, who, when pursuing his own proper duty, is exercising benevolence and talent of the highest order in adjusting and regulating the contentions of his fellow men; and thus through all classes, the farmer has cause to rejoice and feel proud, in his liberal and cheerful efforts to develope and sustain them. But what has this powerful body of men done for themselves? *Nothing—nothing* for their own special advancement in the art and science of agriculture!!

And here let me ask reference to one of the principles claimed to be established at page 79 of the *Cultivator*, when first calling the attention of my brother farmers to the value and necessity of *order, system and economy*, it was then stated that "the power of man, when used without the application of mind or intellect, degrades him in his own estimation, reducing him to a condition of servitude and dependence."

It is not to be supposed that any man will deny this position, for we have abundant proof in the abject condition of man, thus circumstanced at various places on this earth. Admitting the truth of this position, is it not equally true, that the greater amount of intellect employed in directing the power of man, the more elevated, free and independent is his condition? Now let us apply these truths to *our* class, as farmers, and compare the amount of intellect we use in our vocation with the amount used by the divine, the lawyer or physician. Must we not frankly admit, that to a great extent, we are negligent in this particular; and, consequently, where this neglect prevails, there we are valued below our capacities and natural conditions? Yes, we may not deny it, but we can and ought promptly to open to the body of farmers the broad door to knowledge, whereby we may readily and easily substitute intelligence for mere force, "the power of knowledge for the power of muscle." While we participate in common in the blessings of our common schools, and while we joyfully and gladly contribute to the advancement of knowledge among other classes, let us no longer neglect the interests of our own sons, but with unceasing energy claim an equal distribution of *all the facilities* for the distribution of science and art, as applicable to the cultivation of the earth.

As our colleges and prominent seminaries are now conducted, they give us abundant opportunities for training the mind, for exercising it and enabling it to grapple with abstruse studies. All this is well, and is quite as important to the farmer as to any profession; but once within the walls of our present educational halls, and we find that the minds of the boys, though well exercised, are insensibly led from the most important and pure views of progress in life, by means of agriculture, to hazard their destinies in the ambitious short-lived road of public employment, or in the scheming, speculative tracks of trade and commerce. Here is the point, then, we must needs start from: either our existing system of education, in all our seminaries, must make agriculture a department equal in importance and as honorable in pursuit, as any and every other vocation of man, otherwise a large portion of the funds which we farmers now contribute for education, must be applied to the direct, special advancement of education, with a single view to the agricultural interests.

I need hardly remark that to this end, the farmer *needs* as high talent for his use, and as extensive knowledge as is needful for any vocation on the earth.

These are the means we must use, and probably the course we must pursue to cause our class to hold the elevation to which it is entitled, to use mind and intellect in the application of our power, securing the highest condition of man in this world, and the best preparation for comprehending and entering upon those duties which lead to perfect happiness in the world to come.

To produce this result, we have need for *order* and *system*, or in other words, union and systematic action, as a class of men pursuing a vocation distinct from all others,—more important than all others,—and without which, all art, all science would decay. AGRICOLA. *Seneca County.*

TAN CONVERTED TO MANURE.—This, it is said, may be successfully accomplished, by placing alternate layers of spent tan and lime, the former 2 feet thick, the latter 3 inches—remaining thus for two years.

Farming in Missouri, &c.

Eds. Cultivator—Time and inclination at length concurring, I proceed to comply with your request, made more than a year ago; and undertake the task of giving you an impartial account of our section of the country, its advantages and disadvantages, location, soil, products, mode of farming, &c.

Cooper county, of which Boonville, a village of some 2,000 inhabitants, is the county seat, is situated very near the centre of the state, about 160 miles by land, and 200 by water, west of St. Louis, on the southern bank of the Missouri river.

That river, though one of the muddiest and most turbulent streams in the known world, filled with snags and sand-bars, rendering its navigation difficult and dangerous, is, notwithstanding, of incalculable benefit to the farmers in its vicinity, in conveying their produce to market.

We are all on the tip-toe of expectation at present, in looking out for the great Pacific rail-road, which we calculate will run somewheres near here, if it ever runs at all. It is expected to give a great impetus to the business of farming, when it does come. How that may be I am unable to say, but we certainly need something to stir us up.

The timber and prairie are more equally divided in this county than in almost any other in the state,—decidedly more so than in any other possessing the same advantages of productive soil and convenience to market. When I say convenience to market, understand me as speaking comparatively. Our market here, at best, is very inconvenient, unless we avail ourselves of the home market, and that is limited, besides being very uncertain and fluctuating. The soil in this county is not so deep as in some of the other counties above, on and near the river, nor is it so well adapted to the growth of hemp and tobacco as some of them, but for Indian corn, oats, red and white clover, timothy, orchard and blue-grass, melons, pumpkins and squashes, sweet and Irish potatoes, turnips and beets, it is not excelled by any section I have seen, and my observation has extended over more than half the states in the union, and particularly over the west.

Particular localities may beat it in the production of some particular article named above, as the Wabash and Sciota valleys in Indian corn, some parts of Illinois in oats, and some of the southern states in sweet potatoes, but taken in the mass I believe we can compete with any portion of the continent. Wheat is a very uncertain crop here, on account of winter-killing, though when it escapes, we get good crops.

Buckwheat, barley and rye, do pretty well, though they are not cultivated to a very great extent. All kinds of fruits suited to our climate, such as apples, pears, peaches, plums, grapes, strawberries, &c., succeed admirably. Our prairies are covered with the wild strawberry, while our forests abound with wild plums, grapes and paw-paws, black-berries, raspberries, persimmons, &c., besides a variety of nuts, such as the hazel, hickory, black and white walnut, &c.

The principal articles of export from this section of the state, are hemp, tobacco, mules and horses, beef cattle, pork and wheat. The articles of hemp, tobacco and wheat, and most of the pork, is shipped to St. Louis. Our principal market for mules and horses is Louisiana, and for a few years past, Texas—a distance of from 400 to 600 miles, the nearest point, when taken by land, and 1500 or 2000 when carried by water. Last spring, however, the California emigration created a market for most of our surplus mules and oxen nearer home. The annual caravans leaving for California, together with the constantly increasing trade from this state across the plains to Santa Fe, will be very apt to cause an increased demand for mules and oxen for many years to come. Our stall-fed cattle are principally driven to St. Louis and slaughtered. But immense droves of 3, 4 and 5 year old steers, are annually bought up in this section and driven to Illinois, Indiana, Ohio and Virginia, there fattened, and then driven to Baltimore and other eastern markets. Our prairies afford fine grazing, and when they are eat out, the prairie grass is replaced by blue grass and white clover.

Farming here is conducted on the regular skinning system—taking everything and returning nothing, and new as the country is, numbers of farms are beginning to feel and show the effects of it. Crops on land that has been in cultivation from 10 to 15 and 20 years, are beginning to grow "small by degrees, and beautifully less." There seems to be a continual struggle with each farmer to have longer strings of fence, bigger fields, and more ground in corn than his neighbor. The result of which struggle, in conjunction with the ease with which land is brought into cultivation in the prairie convenient to timber, is that most of the farmers in this country *scratch* over a great deal of ground but *cultivate* none. Instead, however, of endeavoring to extricate themselves from their difficulties in the most reasonable way possible, that of ceasing to enlarge their farms and sowing grass seed until they are reduced to a manageable size, the cry is still more land, more corn. It is corn, corn, corn,—nothing but corn.

I know numbers of farmers who cultivate from 50 to 150 acres of land, who have not exceeded 5 acres of grass on their farms, and many of them not a spire except what nature has sown for them. This, too, is one of the best grass countries in the world, and where the same labor expended in the cultivation and sowing of timothy and clover hay, will feed fully double the stock that it would in raising corn. It is true that we have some honorable exceptions to this rule, but I am sorry to say not many more than one sufficient to prove the rule.

We have some excellent stock, but as a general rule the stock here is exceedingly scrubby. The generally received opinion amongst the sovereigns here, is, that a big corn-crib, well filled, makes fine stock, and consequently they are indifferent about improving it by procuring the improved breeds of cattle, hogs and sheep, to breed from. There has been more done in improving the breed of hogs than anything else, but there is great room for improvement yet, even with them.

The wheat crop has generally been very light here this season,—the rust destroying thousands of acres that had escaped the winter. I didn't cut a head of mine, which, but for the rust, would have made a tolerably fair crop.

Oats and timothy were fine. Owing to the long-continued wet weather and backwardness of the spring, the corn crop is rather backward, and in some parts of the state the prospect is very gloomy,—the wet weather preventing the planting of thousands of acres, as well as the cultivation of a great deal after it was planted. The prospect in this county bids fair for an average crop, and considering the unfavorableness of the season it looks very well, but being more backward, and much more foul than usual, a drought now would cut it short.

As to manuring, the idea is looked on as preposterous! "What! manure our rich virgin soil that only requires planting, and a plowing or two to produce ten barrels of corn to the acre! Absurd. That was not what we left our old worn out lands for—away back in old Virginia, old Kentucky, or Tennessee, as the case may be, where we had to tug and toil, scratch and scrape, haul manure all winter, and plough all summer, and then scarcely make enough to keep soul and body together! Let them haul manure that like it, we're not in that line of business."

That's the way they talk. Just "go it" my good fellow. Stick to that, and carry it out, and in less than 30 years you, or some of your children, will be using similar language away off in some nook of the Rocky mountains, or on the Pacific coast, in California or Oregon, or it may be in some prospective territory not yet "annexed."

Take the state over, and I have no idea that one farmer out of fifty has ever hauled a load of manure to his corn field since he has been in the state. I have doubts, even, whether one in a hundred has ever done it. Year after year the manure accumulates in their lots and crowds their stables and barns, a perfect nuisance, rotting down their barns and rendering it impossible for the stock confined in the lots to find a dry place to lie down in wet weather. So, of course, they have either to stand up or lie in the mud.

Food is plenty; an abundance is given them; they eat a little, perhaps a fourth of what is given; run over and tramp the balance in the mud, and then for want of some dry place to lie down and ruminate they stand knee deep in mud and shiver, while their owner wonders why his cattle don't thrive better!

Some, however, have the foresight and sagacity to avoid all this, by building their stables, barns, &c., over or contiguous to a ravine, by which they are drained, so that each shower abates the nuisance, and the lucky farmer is not troubled with muddy lots and rotting barns. But while this process is going on, how is the corn field progressing? Is it increasing in fertility, or maintaining its original productiveness? One might suppose from the way in which the "farmers bank," as the manure heap has been aptly styled, has been neglected, the spend-thrift manner in which the very essence of fertility is squandred, that the fertility of the soil was inexhaustible, and that the application of manure would be a work of supererogation—labor thrown away. But is such the fact?

If I might be allowed to express an opinion, I should say it was not. Although this state was settled as it were but yesterday, there are plenty of farms now within its limits that are literally worn out. Jas. R. Hammond. *Shandy Hall, Cooper county, Mo., Aug. 7th, 1849.*

The Veterinary Department.

Disease of Horses' Feet.

Eds. Cultivator—With your permission I wish to resent the readers of your valuable journal with a few emarks on a disease of horses feet, which has been nusually prevalent during the last spring and summer. 'he disorder we are about to consider is known among veterinarians" by the technical term navicular thritis, r navicular lameness.

The cause most fertile in the production of this sease is prolonged rest in the stable, the high temerature of the stable inducing dryness of the hoof and sorption of the sensitive, fatty frog, the horny part ntracts, the sole becomes hard, thick, and concave; d if to these be added circumstances which still rther favor the drying of the hoof, as the late long ntinued drouth, in many cases the elevation of the le becomes permanent. If the horse is now taken t and called upon to perform severe exertion, his feet ing highly predisposed, are very liable to become the at of inflammatory action, either in an acute or ronic character.

To occasional causes, belong galloping upon rough, uneven ground, sudden springs, during a hard trot, false steps in which the toes have to support an unusual amount of weight until the heels can reach the ground. It is stated by Youatt, that Prof. Coleman used to say with regard to shoeing, there were only two principles to be impressed upon the mind. "1st, The frog must receive pressure; 2nd, The sole must not." In fact I believe at the present day it is generally admitted as an established truth, that a certain degree of pressure to the frog is necessary, in order to keep it in a state of health; yet in the face of all this, we find more than one half our best horses shod with "calkins," which not only prevent pressure upon the frog, but give unsteadiness to the horse's action. Even in going down hill they place the limb in anything but a favorable position; they prop up the heels, and give the fetlock joint a forward inclination, and throw nearly the whole weight upon the toe of the foot. The symptoms which indicate navicular lameness, are a short, cautious step, most of the weight being thrown upon the toe, both in the stable and on the road. Generally the horse walks but little lame, although very much so in a trot. The sole of the foot is unusually concave, and the clefts are often very deep.

The treatment of course must vary with the stage and state in which we find the foot. In a recent case, after removing the shoe, pare the sole and rasp the crust thin at both quarters of the hoof, to diminish the pressure on the internal parts of the foot as much as possible, and then envelope the whole foot in cloths soaked in cold water, or in an ample poultice of bran or linseed meal, kept constantly moist with cold water. The poultice must be renewed once in twelve hours. Next, a blister, taking in the whole of the pastern and coronet, may be tried; and when the heels and quarters (if they were reduced by the rasp, &c.,) are sufficiently strong, a spring or thick heeled shoe (without calkins) should be carefully tacked on to the foot. This with a piece of felt or leather placed between the shoe and the crust, will (as much as possible) keep the injured part in a state of repose. The sole of the foot should be covered occasionally with tar and salt. If sand collects under the leather it (the leather) must be cut out close to the inner rim of the shoe. H. S. Copeman, V. S. *Utica, N. Y.*

Osage Orange Hedges.—There can be no question that these form the most formidable protection to orchards against thieves that has been discovered; but according to the results of the experiments at Mount Airy Agricultural Institute, Pa., they are not well adapted to small lots of land in tillage, the growth of corn and turnips having been greatly retarded by the influence of the roots for 10 or 12 feet on each side of the hedge.

Purity of Salt.—According to Dr. Beck's analysis,—

1000 parts	Syracuse coarse salt	contain	991	pure salt.
1000 "	" dairy salt	"	974	" "
1000 "	Turk's Island salt	"	984	" "
1000 "	Cheshire rock salt	"	986	" "

Depth and Altitude of the Lakes.—According to Dr. Drake, St. Clair is 20 feet, Erie 84, Ontario 500, Superior 900, Huron and Michigan 1,000. Off Saginaw Bay, in Lake Huron, 1,800 feet of line have been let down without reaching bottom.

Lake Ontario is 232 feet above tide water; Erie 333 feet above Ontario; St. Clair 6 feet above Erie; Huron and Michigan 13 feet above St. Clair; and Superior 44 feet higher.

Huron can never be drained; for while its surface is 684 feet above the surface of the sea, its bottom in Saginaw Bay is more than 1,100 below the same level.

New-York State Agricultural Society.

State Fair at Syracuse.

The Ninth Annual Show and Fair of the New-York State Agricultural Society took place at Syracuse, on the 11th, 12th and 13th of September. Considered as a whole, the display may be said to have surpassed all those of former years. The people were out *en masse;* the number which entered the show-grounds could not have been less than sixty-five to seventy thousand.

The receipts for tickets and memberships, were eight thousand fifty-five dollars and fifty-five cents. The assemblage was gathered chiefly from our own State, though there were thousands from the various sister States, from Maine to Texas, and from the Canadas.

This association is evidently exerting an important influence—an influence which is not only felt throughout the whole of our own country, but is even affecting our national relations. It is opening and cultivating an acquaintance abroad, which cannot fail to be favorable to the promotion of peace, and a proper regard to our character as a people. At home, its annual exhibitions are justly looked upon as the most important gatherings of our citizens. On these occasions, men of all sects and parties mingle harmoniously together, mutually ardent for the advancement of a common object—the real prosperity of the country. Here friendships are formed by which party and personal animosities are worn away, and the people are brought to look, unbiassed, at those principles which concern their welfare.

The show-grounds were well situated. They were on a hill of sufficient elevation to give a fine view of the surrounding country, embracing an area of twenty-five to thirty miles. The field, which contained upwards of twenty acres, had some inequality of surface, but not more, perhaps, than was favorable to general picturesqueness. As at Buffalo, the cattle were placed in a grove, where they were protected from the scorching heat of the sun. The general arrangement of the classes was very convenient, and does much credit to Messrs. Sotham & Fuller, who had charge of this department. Stalls were provided on the ground for about seventy horses, but from the great number exhibited, it was impossible to accommodate in this way, but a small proportion of the whole.

We have only room at present for the following notices:

Of Horses there were fine specimens of the different classes; but as the writer was closely engaged in other departments, he had not an opportunity of seeing all the animals exhibited. Of blood horses, we noticed imported Consternation, owned by J. B. Burnet, Esq., of Syracuse; Young Alexander, owned by Mr. Ireland, of Albany, and Lance, owned by Mr. Huff, of Buffalo.

Of the Morgan stock, there were some excellent specimens from this State, and from New Hampshire and Vermont. The Gifford Morgan, twenty-three years old, owned by Mr. Wier, of Walpole, N. H., came over to the fair for the third time, not for premium; but just to show that time has not yet left on him any mark of age or decrepitude. Morgan Hunter, owned by Ackley & Gilbert, of East Hamilton, Madison county, N. Y., the General Gifford, exhibited by G. A. Mason, of Jordan, N. Y., and the Major Gifford, exhibited by Mr. Blodgett, of Chelsea, Vt., are valuable animals, closely resembling their sire, the Gifford Morgan. They attracted great attention. A very fine and showy horse, four years old, got by the noted Black Hawk, was exhibited by H. Felton, of Tiponderoga.

We noticed an excellent gray stallion owned by Alex. Maxwell, of Jackson, Washington county. He is a horse of fine action, and handsome appearance. An Irish hunter, imported in 1843, by Mr. Brown, of Johnstown, Fulton county, appears to be a strong and vigorous animal. A five-year-old stallion of his get, owned by Mr. Schermerhorn, of Schenectady, appeared favorably, as did also the horses of Mr. Nottingham, of Palmyra, and Mr. Blakeslee, of Connecticut, and others.

Of draught horses, we noticed several good animals, particularly Honest Tom, owned by Mr. Pettit, of Bridgwater, Oneida county, and Young Alfred. A chestnut stallion from Canada, weighing 1,400 lbs., attracted much attention.

Of colts under three years old, there was a large display, though we were unable to learn particulars in regard to many which deserved notice. Mr. Arthur, of Ticonderoga, Mr. Hall, of Bridport, Vt., and Mr. Austin, of Orwell, Vt., each exhibited a fine two-year-old, by Black Hawk. All showed remarkable symmetry and action for their ages. Mr. Burnet, of Syracuse, showed a very handsome colt, by Consternation.

The Cattle were more numerous, and in general of better quality than have ever before been offered at our shows. The greatest display was by the Devons. The Short-horns were better, on the whole, than at our shows for several years past. Comparing the different classes, we think the Herefords and Devons were more *evenly* good than the Short-horns, though among the latter there were some splendid animals.

Of Short-horned bulls, we noticed Col. Sherwood's imported 3d Duke of Cambridge, a bull of excellent points; a fine bull exhibited by Mr. Bell, of Morrisania, Westchester county; a yearling bull offered by Mr. Morris, of the latter place. There were several fine cows and heifers in this class from the herds of Col. Sherwood, of Auburn, Mr. S. P. Chapman, of Clockville, Madison county, Mr. Morris, and Mr. Rone, of Mount Morris, Livingston county.

Of Herefords, the principal exhibitors were Mr. Sotham, of Black Rock, and the Messrs. Bingham, of Vermont. There were several well-shaped bulls, and some excellent cows—all first-rate *handlers*—in this class.

The Devons were out in greater numbers than at any previous show. Mr. Washbon, of Butternuts, Otsego county, had forty head on the ground. Mr. Beck, of Sheldon, Wyoming county, had a numerous delegation from his justly esteemed herd; and specimens of the breed in smaller numbers were shown by various individuals. Among bulls, the one exhibited by Mr. Gapper, of Canada, could not fail to attract attention. He was, beyond question, one of the most complete and finished animals ever exhibited at our shows; and we think the breeders of Devons are under special obligations to Mr. Gapper, for exhibiting him on this occasion. Good bulls in this class were shown by Mr. Remington, of Sennett, Mr. Van Rensselaer, and Mr. Washbon, of Butternuts, Mr. Law, of Meredith, Delaware county, Mr. Hamlin, of Aurora, Erie county, Mr. Earle, of Salina, and others. Fine cows and heifers were offered by Mr. Washbon, Mr. Beck, Mr. A. Stevens, Mr. Van Rensselaer, Mr. Baker, and others, whose names we did not learn.

In Ayrshires, the competition was not large; but an excellent bull and some cows of first rate quality were shown by Mr. Prentice, of Albany. We noticed, also, some good animals in this class offered by Mr. Morris, of Morrisania.

The fat cattle were numerous, and generally excellent. A fine pair of Durham oxen, five years old, weighing 5,000 lbs., were shown by Mr. Sheldon, of Sennett, Cayuga county; a fine pair of the same breed, four years old, were offered by Mr. Rone, of Mount Morris, who also exhibited two remarkably fat cows, nearly full blood Durhams. Mr. Leach, of Eaton, Madison county, showed a very fine cow, four years old, weighing 2100 lbs., a cross of the Durham, and a pair of large oxen. Mr. Nowlan, of Sennett, showed a pair of cross-bred Durhams, six years old, weighing 5236—very fat. Mr. Doty, of Wyoming county, showed a very large pair of red oxen, one of which was a very fine animal. A three-year old Durham heifer, offered by Mr. Barber, of Cortlandville, attracted much and deserved commendation. She is an animal of uncommon symmetry, and was not excelled in the essential qualities of a *grazier* by any animal on the grounds.

Among the *grass-fed* cattle we noticed a beautiful pair of Devon oxen, offered by Mr. Beck. For lightness of offal and quality of flesh they were justly admired, and showed what may be expected of good Devons when turned to beef.

The working oxen we had not an opportunity of examining particularly. There was a team of twenty yoke from Homer, Cortland county, among which we noticed several yoke of good appearance. Mr. Sheldon, of Sennett, Cayuga county, had, as usual, several yoke of oxen and steers, of good form, and in fine condition. Mr. Church, of Vernon, Oneida county, showed a pair of four-year-old cattle, seven-eighths Devon, of good form, but rather small size. They had been trained with great care by Mr. Church's son, and exhibited a perfection of dicipline, and a degree of intelligence which we have never seen equalled in their species. Mr. Washbon, of Butternuts, and Mr. Bundy, of Otego, each exhibited several pair of beautiful cattle, three and four years old, half Devon, by a bull bred by Mr. Patterson, of Baltimore.

Sheep of all classes were well represented. The large French Merinos were shown chiefly by Messrs. Bingham, of Vermont. Other Merinos of less size of carcass, but finer quality of wool, were shown by Col. Sherwood, of Auburn, Mr. J. L. Randall, of Lysander, Mr. Blakeslee, of Connecticut, and Mr. Robinson, of Vermont. Fine Saxons were shown by Mr. Church and Mr. Crocker, of Vernon, and Mr. L. G. Bingham, of Vermont. Some excellent sheep, a cross of the Saxon and Merino, were exhibited by Mr. Curtis, of Canaan, Columbia county. South Downs of good quality were shown by Col. Sherwood, and Mr. Wakeman, of Herkimer. Of long-wooled breeds, there were some excellent specimens of Leicesters shown by Mr. Miller, of Canada. Mr. Allen, of Black Rock, showed some good Cotswolds.

The show of Swine, though better than that of some years, was not equal to the best. There were some good specimens of the Leicester breed, and of that breed crossed with the Berkshires. We noticed some young pigs bred by Mr. Henry Parsons, of Guelph, Canada West. They were a variety which Mr. Parsons has been several years in producing from a cross of the Sussex and Russian grass breed. They are small in bone, of handsome form, and give an excellent quality of flesh.

The show of Poultry was comparatively meagre, and devoid of that interest which has for several years attached to this department. We noticed several coops of large fowls of the Malay race; Mr. Platt, of Albany, made quite a display of beautiful Java Bantams. They formed the most attractive feature of the poultry show. There were a few specimens Bremen geese, Muscovy and top-knot ducks.

Dairy Products were less in quantity than at Buffalo; but the display was, notwithstanding, creditable in extent; and we learned from the committee having charge of this department, that the quality of the butter and cheese was generally excellent. We observed that there was considerable competition from the principal dairy districts in this state, and there were several samples of cheese from Ohio. The lots being simply designated by numbers, we were unable to learn the names of the competitors, except in a few instances.

The Implement Department was admirably filled, forming a display exceeding anything of the kind which we have ever before seen. We shall notice the articles more particularly hereafter. The principal exhibitors were Messrs. Emery and Wheeler, of Albany, Burrall, of Geneva, Rapalje and Briggs, of Rochester, Starbuck, of Troy, Eddy, of Union Village, Washington county.

The Plowing Match was contested by eighteen teams. The writer was not present at the match, but from having seen the ground after the work was done, is enabled to say that it was done in a manner superior to that of any he has before witnessed at the matches under the auspices of the Society.

"Mechanics' Hall" was filled with a multitude of articles, to notice all of which would require much more space than we can spare. We noticed a "Dairy Steamer" for warming and heating milk in cheese-dairies. Certificates in relation to its operation stated that steam sufficient for warming the milk of sixty cows can be got up in thirty minutes. It appears to be a useful article. It was exhibited by J. H. Bushnell, Utica.

A great number of stoves were exhibited, embracing all the improvements in this line. Mynderse & Co., of Seneca Falls, exhibited stoves with Race's regulator attached, as represented in a cut on another page of this number. It is a valuable invention. Dudley & Co., of Buffalo, exhibited a large assortment of stoves, the largest of which (Hathaway's) is capable of doing the work for the largest hotels. The price is $300. A double acting force-pump shown by Downs, Mynderse & Co., Seneca Falls, appears to be an improvement on pumps heretofore in use.

Mr. Wheeler, of Albany, exhibited Dix's anti-friction press. It is a powerful machine, being capable, by the power of one man, of cutting teeth from cold cast-steel plates, suitable for saw-mill saws.

A sewing machine, offered by Mowry & Johnson, New York, was a curiosity. It sowed two thicknesses of cloth in a firm manner at the rate of three feet per minute. The price of the machine is $100.

In the "Manufacturer's Hall" the display was large and attractive, but from the great crowd of people which constantly filled the building, it was impossible to take particular notes of the articles, and we must refer to the reports of committees. Among the fabrics we noticed broad-cloths, cassimeres, and shawls, manufactured by D. Kellog, Skaneateles. The shawls attractted great attention, and were much sought after by purchasers. His other articles were of a quality that did credit to the manufacturer.

There was a good display of useful articles of household manufacture, and a large number of fancy articles.

In the Fruit and Floral Department, the display was less extensive than in some former years, especially in flowers, which, from the unprecedented drouth which has prevailed in the central and western portions of the state, have not developed themselves in their usual perfection. The size and quality of the fruits, too, has been affected by the same cause. Still the fruits exhibited, were mostly of good quality and fine appearance. Very fine peaches were shown from the neighborhood of Rochester, by Elwanger & Barry, and others. Apples and pears of the most esteemed kinds, were exhibited by B. Hodge and A. Bryant, of Buffalo, J. W. P. Allen, of Oswego, John Morse, Cayuga [illegible]idge; and a very handsome collection from northern and middle Illinois, by Messrs. Harkness, Overman, and Kennicott. Fine specimens of plums were shown by Mr. Denniston, of Albany,—who presented fifty-five varieties from his own garden; by Dr. H. Wendell, of Albany, by Elwanger & Barry, Rochester, R. Woolworth, H. G. Dickerson, and others.

There were good specimens of grapes shown by Messrs. Langworthy of Rochester, Coppock of Buffalo, Hastings of Clinton, and others.

Of **Flowers** we noticed specimens, both singly and in bouquets, from J. Wilson, of Albany, Dr. Jackson, of Schenectady—(who exhibited a collection of splendid seedling verbenas of his own raising,) and Mr. Le Couteulx, of Buffalo. The latter gentleman presented several specimens of new variegated asters, of rare character, and most beautiful appearance, which attracted the admiration of all.

Among the curiosities in this department may be mentioned a cornucopia, offered by Mr. Barber, of Homer. Its frame-work was of wire, the exterior tastefully covered with beautiful flowers, and from its internal cavity, the finest and most luscious fruits of various kinds were pouring out. It was an object which received warm commendations.

A very pretty article consisting of a grass bouquet on a moss-covered stand, was much praised for the good taste displayed in its structure. We did not learn the name of the exhibitor.

The show of **Vegetables** was limited, the prevalence of the drouth being sensibly seen in this department. As usual there were some large pumpkins, one of which weighed 125 lbs. We noticed some samples of seedling potatoes of good size and shape, but did not learn the name of the exhibitor.

The **Address** by Prof. **Johnston** was listened to by a very large audience, and was received with much approbation. The subject-matter consisted of two principal divisions. The first embracing a general view of the agriculture of the different countries of Europe; and the second a brief exposition of the principles of agriculture and its connection with the sciences. It was a document of considerable length, and occupied upwards of an hour in the delivery; but the deep interest manifested by the people in the beginning, was maintained to the last, as was indicated by the hearty cheers which greeted the speaker at the close. In a word it may be said that the high reputation which Prof. Johnston had acquired among our people, through his writings, was fully supported by the address; and we cannot but flatter ourselves that the impressions by the first acquaintance have been mutually favorable. Our opportunities for hearing the address would not justify an attempt to give even a synopsis of it, and our readers must be content to wait for its appearance under the sanction of the Society.

Among the distinguised visitors at the fair, were Hon. **Henry Clay**, of Kentucky, Vice President **Fillmore**, Gov. **Fish**, Ex-Gov. **Marcy** and Lieut. Gov. **Patterson**, Hon. **Frs. Granger**, of New York, Gen. **Wool**, Hon. Mr. **Clingman**, M. C., from North Carolina, Hon. H. L. **Elsworth**, of Indiana, and numerous delegates from the Canadas and the Agricultural Associations of the different states of the Union.

Draining.—The full advantages of thorough underdraining are rarely appreciated. An excellent practial farmer in this state, who has laid down several miles of tile drains, thinks that thorough draining will do more to improve the agriculture of New York, than all other improvements [without it] combined. Lands inclining to be wet can be plowed much earlier in the spring, an eminent advantage to some crops,—the plowing can be done with far greater ease,—and one plowing will pulverise the soil as well as three on undrained wet lands. The great advantage is in the vast increase in the amount of crops.

List of Premiums

Awarded at the State Fair at Syracuse.

CATTLE—Short Horns.

Bulls—*Over three years old*—1. To J. M. Sherwood, Auburn, $25.—2. Thomas Bell, Morrisania, $15.—3. S. P. Chapman, Clockville, $5.——*Two years old.*—1. Wm. Fuller, Skaneateles, $20.—2. A. G. Perry, $10.—3. J. B. Burnet, Syracuse, $5.——*Yearlings.*—1. L. G. Morris, Morrisania, $15.—2. S. P. Chapman, $10.—3. Not awarded.——*Calves.*—1. L. G. Morris, $10—2. J. M. Sherwood, Trans. and $3.

Cows.—1. S. P. Chapman, $25.—2. L. G. Morris, $15—3. J. M. Sherwood, $5——*Two years old Heifers.*—1. F. Rotch, Butternuts, $20—2. L. F. Allen, Black Rock, $10—3. F. Rotch, $5——*Yearlings.*—1. Ambrose Stevens, New-York, $15—2. J. M. Sherwood, $10—3. S. P. Chapman, $5.——*Calves*—1. L. F. Allen, $10—2. J. M. Sherwood, Trans. and $3.

DEVONS.

Bulls.—*Over three years old.*—1. R. H. Van Rensselaer, Butternuts, $25—2. R. M. Remington, Sennet, $15—3. Joseph Blakeslee, Westchester, $5——*Two years old.*—1. David S. Earl, Salina, $20—2. H. N. Washbon, Butternuts, $10——*Yearlings.*—1. H. N. Washbon, $15—2. David C. Howe, $10——*Calves.*—1. E. P. Beck, Sheldon, $10—2. H. N. Washbon, Trans. and $3.

Cows.—1. Ambrose Stevens, $25—2. H. N. Washbon, $15—3. E. P. Beck, $5——*Two years old.*—1. L. F. Allen, $20—2. and 3. E. P. Beck, $10 and $5——*Yearlings.*—1. H. N. Washbon, $15—2. E. P. Beck, $10—3. R. H. Van Rensselaer, $5——*Calves.*—1. H. N. Washbon, $10—2. Ambrose Stevens, Trans. and $3.

HEREFORDS.

Bulls.—*Two years old.*—1. Allen Ayrault, Geneseo, $20—2. W. H. Sotham, Black Rock, $10——*Calves.*—1. W. H. Sotham, $10—2. A. Ayrault, Trans. and $3.

Cows.—1. W. H. Sotham, $25—2. A. Ayrault, $15—3. L. F. Allen, $5——*Two years old Heifers.*—1. W. H. Sotham, (for Coquette) $20—2. A. Ayrault, $10——*Yearlings.*—2. W. H. Sotham, (for Jenny Lind,) $10—3. L. F. Allen, $5——*Calves.*—1. L. F. Allen, $10—2. W. H. Sotham, Trans. and $3.

AYRSHIRES.

Bulls.—1. E. P. Prentice, Albany, $25—2. L. G. Morris, $15——*Calves.*—1. E. P. Prentice, $10.

Cows.—1. E. P. Prentice, $25—2. Robert Rone, Mount Morris, $15——*Two years old.*—1. E. P. Prentice, $20——*Yearlings.*—1. E. P. Prentice, $15—2. Robert Rone, $10—3. L. G. Morris, $5——*Calves.*—1. E. P. Prentice, $10.

NATIVE AND CROSS BREEDS.

Cows.—1. David S. Earl, $20—2. S. P. Chapman, $12—3. L. G. Morris, $4——*Two years old.*—1. C. C. Cook, $15—2. D. S. Earl, $10—3. L. S. Bundy, Otego, $3——*Yearlings.*—1. E. Sheldon, Sennet, $10—2. P. B. Williams, $8—3. R. M. Remington, $3——*Calves.*—1. C. Merriman, $3—2. S. C. Parker, Trans.

WORKING OXEN.

Best team of 20 yoke from any county, to Cortland county, $30——*Single yoke.*—1. E. Sheldon, $25—2. John Bryden, $15—3. Hiram Clift, Trans. and $3——*Best trained Cattle.*—J. B. R. Church, Silver Medal.

STEERS.

Three years old.—1. H. H. Eastman, $10—2. E. W. Sheldon, $8—3. J. N. Clyde, Trans. and $3——*Two years old.*—1. B. H. Streeter, $10—2. E. W. Sheldon, $8—3. J. N. Clyde, Trans. and $3——*Yearlings.*—1. James H. Sherrill, $8—2. H. Sheldon, $5—3. J. Nair, Trans. and $3.

FAT CATTLE.

Pair of Oxen.—1. L. Doty, $25—2. E. Sheldon, $15—3. Asa Nowlan, Avon, $10——*Single Ox.*—1. E. Munson, $15—2. H. Sheldon, $10——*Cow.*—1. Clement Leach, $15—2. Robert Rone, $10——*Pair of Steers.*—1. Robert Rone, $15——*Heifers.*—1. J. Barber, Homer, $10.

Animals fattened on Hay and Grass only.—*Pair of Oxen.*—1. E. P. Beck, $20—2. Israel Boies, Cortland, $12——*Single Steer.*—1. E. Sheldon, $8—2. John Reeves, $3—3. J. B. Burnet, Trans.——*Cows.*—1. Robert Allen, $10.

FOREIGN CATTLE.

Best Hereford bull, L. G. Bingham, Williston, Vermont, $25—Best Devon bull, R. C. Gapper, Canada, $25—Best yearling bull, L. Bingham, Vermont, $10—Best bull calf, R. C. Gapper, $5.

Best Cow—1. To "Sally," $25, and 2. to "Cherry," $15, both Herefords and owned by L. G. Bingham, Vermont.

HORSES.

For all Work.—*Stallions.*—1. Wm. Ferguson, $20—2. Nottingham & Allen, Palmyra, $12—3. David Osgood, $8—4. O. Harland, Youatt——*Mare and Colt.*—1. Reuben H. Russ, $20—2. Edward Munson, $12—3. Anthony Decker, $8—4. Wm. Prior, Youatt.

For Draught.—*Stallions.*—1. Nottingham & Allen, $20—2. Cornelius Schobey, $12—3. John D. Spinner, Herkimer, $8—4. J. F. Thompson, Youatt.——*Mare and Colt.*—2. David Wemple, $12—4. J. H. Lamberson, Youatt.

Blood—*Stallions.*—1. W. W. Huff, $20—2. Clark & Earl, $12—3. Simon Schermerhorn, $8—4. Pardon Austin, Youatt. To "Consternation," owned by J. B. Burnet, Certificate as the best in the class, he having heretofore been awarded the first prize.

Three years old.—*Stallions.*—1. A. Butler, $15—2. E. Moore, $10—3. H. S. Marsh, Youatt—4. Wm. Norton, Trans.——*Mares.*—1. Elias Thomas, $15.

Two years old.—*Stallions*—1. F. Brown, $10—2. R. G. Arms, Ticonderoga, $5—3. J. Van Hoesen, Trans.——*Mares.*—1. John J. Boshart, $10—2. N. R. Williams, $5—3. J. N. Holmes, Trans.

Yearlings.—*Stallions.*—1. J. Muir, $5—2. J. Housenfrats, Youatt—3. Nathan Soule, Trans.——*Mares.*—1. W. B. Van Slyke, $5—2. S. A. Gilbert, Youatt.

Matched.—1. H. Gould, $15—2. Thomas S. Clark, $10—3. Amos Lewis, $8—4. H. Otis, $5.

Geldings.—Certificate to Arden Merrill, Rose.—1. H. L. Barker, $10—2. S. S. Vaughn, $8—3. John Legg, $6—4. Nelson Boomer, $4.

Foreign.—*Stallions* —1. L. D. Harlow, Vermont, $20—2. J. Ashford, Vermont, $15—3. Calvin Blodgett, Vermont, $8—4. G. F. Wheeler, Youatt.

SHEEP.

Long Wooled.—*Bucks, over two years old.*—1. Geo. Swails, $10—2. L. F. Allen, $8—3. Charles N. Hudson, $5——*Under two years old.*—1. Thomas Terry, $10—2. Wm. Rathbone, $8—3. C. N. Hudson, $5——*Pen of five ewes, over two years.*—1. Thomas Terry, $10—2. Wm. Rathbone, $8——*Under two years.*—1. Geo. Swails, $10——*Five buck Lambs.*—1. James Bicknell, $8—2. Thomas Terry, Am. Shepherd and $3——*Five Ewe Lambs.*—1. C. N. Hudson, $8.

Middle Wooled.—*Bucks, over two years old.*—1. Z. B. Wakeman, Herkimer, $10—2. J. M. Sherwood, $8—3. L. F. Allen, $5——*Uunder two years.*—1. J. M. Sherwood, $10—2. Wm. Robson, $8—3. Z. B. Wakeman, $5——*Pen of five Ewes, over two years.*—1. Wm. Robson, $10—2. Z. B. Wakeman, $8—3. J. M. Sherwood, $5——*Under two years.*—1. Z. B. Wakeman, $10—3. E. R. Dix. $6——*Pen of five buck Lambs.*—1. Z. B. Wakeman, $8—2. Wm. Robson, Am. Shepherd and $3——*Ewe Lambs.*—1. Z. B. Wakeman, $8—2. Wm. Robson, Am. Shepherd and $3.

Merinos.—*Bucks, over two years.*—1. N. M. Dart, $10—2. Jos. Blakeslee, $8—3. J. M. Sherwood, $5——*Under two years.*—1. J. D. Patterson, Westfield, $10—2. D. S. Curtis, $8—3. J. M. Sherwood, $5——*Pen of Ewes, over two years.*—1. J. M. Sherwood, $10—2. N. M. Dart, $8—3. Randall & Milliman, $5——*Under two years.* 1. J. Blakeslee, $10.

Saxons.—*Bucks, over two years.*—1. S. H. Church, Vernon, $10—2. S. B. Crocker, Vernon, $8—3. S. H. Church, $5——*Under two years.*—1. S. B. Crocker, $10—2. R. I. Ransom, $8—3. Joseph Haswell, $5——*Pen of Ewes, over two years.*—1. S. H. Church, $10—2. S. B. Crocker, $8—3. Randall & Milliman, $5——*Under two years.*—1. R. I. Ransom, $10—2. S. H. Church, $8—3. Randall & Milliman, $5.

The Hartford Premium.—For this prize of $100, there was but one entry, that of A. L. Bingham, of Cornwall, Vermont, to whom it was awarded.

Foreign.—*Long Wooled.*—To George Miller, of Canada, for best Buck, $10—and also for best pens of Buck and Ewe Lambs, $5 on each——*Merinos.*—Best Buck, to E. Robinson, of Vermont, $10 For best five Ewes, to M. Bingham, of Cornwall, Vt., and to E. Robinson, $5 each. The committee recommend a diploma to L. G. Bingham, to two Ewes.

FAT SHEEP.

Long Wools.—*Over two years.*—1st. $5, and 2d. $3, to J. M. Sherwood——*Under two years.*—1. Z. B. Wakeman, $5—3. Thos. Terry, Am. Shepherd.

Middle Wools.—*Over two years.*—1st, 2d and 3d, to J. Reeves, $5, $3, and Am. Shepherd.

SHEPHERDS' DOG.

1. To M. Bingham, Vermont. $5.

SWINE.

Boars.—*Over two years.*—2. H. N. Washbon, $5——*Yearlings.*—1. James Gilkeson, $10—2. David Preston, $5—3. B. Williams, $5——*Six months.*—2. C. R. Nichols, $3.

Sows.—*Yearlings.*—2. Franklin Thayer, $3.

Pigs.—1. Rufus Cossitt, $10—2. H. N. Washbon, $5.

POULTRY.

Fowls.—Best Polands, to J. S. Cheselbrough, $3—Best Large fowls, to John J. Boshart, $3—Java Bantams, to E. Platt, Albany, $3.

Muscovy Ducks.—Best, to Charles N. Hudson, $3.

Geese.—Best large, to David Cossitt, $3.

FARM IMPLEMENTS, &c.

Plows.—The committee on Plows are to have another meeting, before they make their decision.

Best Farm Wagon, D. W. Seeley, $5.
Best Harrow, A. H. Fitch, $3.
Best Corn Cultivator, Jeremiah Fink, $3.
Best Fanning Mill, Jacob Clapper, $5.
Best Corn Stalk Cutter, J. C. Rich, $3.
Best Straw Cutter, J. C. Rich, $3.
Best Corn and Cob Crusher, H. L. Emery, $5.
Best Clover Machine, Rapalje & Briggs, Rochester, $5.
Best Ox Cart, Paris Barber, Homer, $3.
Best Horse Rake, R. H. Chase, $2.
Best Ox yoke, Gideon Hotchkiss, $2.
Best Carriage Harness, Moses Cherry, $3.
Best Saddle and Bridle, B. Suit, $2.
Best Churn, E. R. Dix, $2.
Best Dozen Axes, D. R. Barton, Rochester, $2.
Best Cheese Press, L. Raymond, $2.
Best Grain Cradle, Chas. Clow, $2.
Best Six Hand Rakes, H. L. Emery, $2.
Best Six Hay Forks, J. Vanorman, $2.
Best Six Grass Scythes, H. C. White, $2.
Best Six Cradle Scythes, Rapalje & Briggs, $2.
Best Six Manure Forks, Rapalje & Briggs, $2.
Best Hay Rigging, J. N. Ransom, $2.
Best Six Dozen Corn Brooms, G. W. S. Brownson, $2.
Best Horse Power, L. B. Benton, Penn Yan, $5.
Best Threshing Machine, B. G. Hathaway, $10.
Best Seed Planter, Rapalje & Briggs, $3.
Best Wheat Drill, Aaron Palmer, Diploma.

Best Grain Drill, with apparatus for depositing the manure, Henry Hoffman, Diploma.

Best Broad Cast Sower, Silas S. Sage, Diploma.
Best Wheat Cultivator, D. B. Rogers, Diploma.
Best Portable Saw Mill, H. L. Emery, Diploma.
Best Corn Sheller for Horse Power, H. L. Emery, Diploma.
Best Corn Sheller for Hand Power, Harris & Carter, Diploma.

Best Show of Agricultural Implements, Rapalje & Briggs, Diploma and $20.

Best Show of Agricultural Implements made in the State, by or under the supervision of the exhibitor, E. J. Burrall, Geneva, Diploma and $20.

The collection of Implements by H. L. Emery, are recommended to the Society as worthy of special notice, for their excellent quality and finish.

H. E. Smith, for Horse Power, Diploma.
Best Saddle, R. T. Norgrove, Syracuse, Silver Medal.
Sausage Meat Cutter, Burdick & Cushing, Diploma.

PLOWING MATCH.

1. To E. Davis, Watertown, $10—2. W. G. Brainerd, Rome, $8—3. Samuel Phillips, $6—4. H. D. Preston, Elbridge, $5.

The last volume of the Transactions of the Society, was awarded to Samuel Lyderman, Geneva; Enoch Marks. Onondaga; O. Howland, Owasco; Thomas Miller, Homer; J. F. Maher, Clay; Wm. Miller, Onondaga; Robert Taylor, Skaneateles; Thomas Mix, Auburn; N. Kniffen, Scipio; John Baker; J. Porter, Onon. Hill; J. T. Hill, Lenox; Wm. Heming and John Morris, Onondaga.

CHEESE.

100 *lbs. less than one year old.*—1. R. D. Brown, Fairfield, $15—2. P. Carter, Lysander, $10—3. Samuel Mathews, Litchfield, $5—4. James P. Hitchcock, Truxton, Trans.

Messrs. Dolph & Barber, of Richmond, Ohio, exhibited a lot of "English Dairy" Cheese, very fine, for which they were awarded a Diploma.

BUTTER.

For the best and largest quantity, made from five cows in thirty days, to Nelson Van Ness, $25—2. To John Holbert, $15.

Made in June.—1. John Shattuck, $10—2. John F. Clark, $5—3. Abram Adams, Trans.

Made at any time.—1. Horace Clapp, $15—2. John Holbert, $10—3. John Shattuck, $5—4. Noah Hitchcock, Jr., Trans.

Made by Girls.—1. Miss Bardwell, Otisco, Silver Milk Cup—2. Misses Van Ness, Mayville, pair of Butter-knives—3. Miss M. E. Hopkins, Cortlandville, set of Tea-spoons.

MAPLE SUGAR.

1. Peter Mitchell, $10—2. Charles W. Taylor, $5—3. Luman Shepherd, $3—4. E. R. Dix, Trans.

DOMESTIC MANUFACTURES.

Woolen Blankets.—1. G. W. Henry, $6—2. Mrs. B. R. Voorhees, $4—3. N. M. Coburn, $2.

Flannel.—1. G. W. Henry, $6—2. Chester Clark, $4—3. C. Lawrence, $2.

Woolen Cloth.—1. W. Baker, $10—2. Mrs. Voorhees, $8—3. S. W. Abbott, $3.

Woolen Carpets.—1. W. E. Talman, $10—2. J. Conger, $8—3. S. Goodell, $3.

Rag Carpet.—1. A. A. Sweet, $5—2. Caroline Tice, $4—3. Betsey Hoffman, Trans.

Hearth Rugs.—1. E. Sheldon, $5—2. Misses J. and M. Robb, $4—3. Miss J. M. Lathrop, $3—4. Mrs. H. Wier, $2.

For pair Kersey Woolen Blankets.—To Mrs. J. W. Collins, $4.

For Double Carpet Coverlids.—1. Wm. Wright, $6—2. L. T. Marshall, $4—3. Wm. Wright, $3—4. Mrs. H. Wier, $2—5. J. E. Diderman, Trans.

For 15 Yards Kersey.—1. and 2. Mrs. J. Harrold, $5 and $4—3. Mrs. H. Wier. $2.

For Knit Woolen Stockings.—1. H. B. Lawton, $2—2. Horace Clarke, Trans.

For Wove Woolen Stockings.—1. Mrs. J. B. Noyes, $2—2. Mrs. S. H. Church, Trans.

For Woolen Fringe Mittens.—1. C. Lawrence, $2—2. H. Clarke, Trans.

For Pair of Gloves, to Mrs. J. P. Noyes, Diploma.

For Pair Lady's Mittens, Mrs. L. T. Marshall, Diploma.

For Buckskin Mittens, very superior, to Z. & W. Case, Gloversville, Diploma. (*To be continued.*)

Corn Fodder and Pumpkins.—J. H. Jenne, in the Boston Cultivator, says that two cows, in fine order, fed on corn-fodder, and with each a large pumpkin a day, gave fourteen quarts of milk per day. When the corn-fodder and pumpkins were gone, they were fed on good hay, when they fell off to seven quarts per day.

Hens eating their eggs.—Hens, it is well known, when kept shut up, are very apt to eat their eggs. The best preventive is to keep them well supplied with lime and gravel, and with *meat* in some form. The nest should be so deep in the boxes that they cannot reach them while standing on the edge.

Barley.—Myron Adams, of East Bloomfield, N. Y., states that nine premium barley crops have been raised in that township in the last six years; the greatest 69 bushels per acre, the least, $48\frac{1}{4}$ bushels; the average, $59\frac{1}{3}$ bushels; the average cost, including interest on land, $10; average price, 50 cents; average nett profit, $14 per acre. They all grew after well manured corn; the amount of seed sown, in nearly every case, was 3 bushels per acre.

own garden; by Dr. H. Wendell, of Albany, by Elwanger & Barry, Rochester, R. Woolworth, H. G. Dickerson, and others.

There were good specimens of grapes shown by Messrs. Langworthy of Rochester, Coppock of Buffalo, Hastings of Clinton, and others.

Of Flowers we noticed specimens, both singly and in bouquets, from J. Wilson, of Albany, Dr. Jackson, of Schenectady—(who exhibited a collection of splendid seedling verbenas of his own raising,) and Mr. Le Couteulx, of Buffalo. The latter gentleman presented several specimens of new variegated asters, of rare character, and most beautiful appearance, which attracted the admiration of all.

Among the curiosities in this department may be mentioned a cornucopia, offered by Mr. Barber, of Homer. Its frame-work was of wire, the exterior tastefully covered with beautiful flowers, and from its internal cavity, the finest and most luscious fruits of various kinds were pouring out. It was an object which received warm commendations.

A very pretty article consisting of a grass bouquet on a moss-covered stand, was much praised for the good taste displayed in its structure. We did not learn the name of the exhibitor.

The show of Vegetables was limited, the prevalence of the drouth being sensibly seen in this department. As usual there were some large pumpkins, one of which weighed 125 lbs. We noticed some samples of seedling potatoes of good size and shape, but did not learn the name of the exhibitor.

The Address by Prof. Johnston was listened to by a very large audience, and was received with much approbation. The subject-matter consisted of two principal divisions. The first embracing a general view of the agriculture of the different countries of Europe; and the second a brief exposition of the principles of agriculture and its connection with the sciences. It was a document of considerable length, and occupied upwards of an hour in the delivery; but the deep interest manifested by the people in the beginning, was maintained to the last, as was indicated by the hearty cheers which greeted the speaker at the close. In a word it may be said that the high reputation which Prof. Johnston had acquired among our people, through his writings, was fully supported by the address; and we cannot but flatter ourselves that the impressions by the first acquaintance have been mutually favorable. Our opportunities for hearing the address would not justify an attempt to give even a synopsis of it, and our readers must be content to wait for its appearance under the sanction of the Society.

Among the distinguised visitors at the fair, were Hon. Henry Clay, of Kentucky, Vice President Fillmore, Gov. Fish, Ex-Gov. Marcy and Lieut. Gov. Patterson, Hon. Frs. Granger, of New York, Gen. Wool, Hon. Mr. Clingman, M. C., from North Carolina, Hon. H. L. Elsworth, of Indiana, and numerous delegates from the Canadas and the Agricultural Associations of the different states of the Union.

Draining.—The full advantages of thorough underdraining are rarely appreciated. An excellent practial farmer in this state, who has laid down several miles of tile drains, thinks that thorough draining will do more to improve the agriculture of New York, than all other improvements [without it] combined. Lands inclining to be wet can be plowed much earlier in the spring, an eminent advantage to some crops,—the plowing can be done with far greater ease,—and one plowing will pulverise the soil as well as three on undrained wet lands. The great advantage is in the vast increase in the amount of crops.

List of Premiums

Awarded at the State Fair at Syracuse.

CATTLE—Short Horns.

Bulls—*Over three years old*—1. To J. M. Sherwood, Auburn, $25.—2. Thomas Bell, Morrisania, $15.—3. S. P. Chapman, Clockville, $5.——*Two years old.*—1. Wm. Fuller, Skaneateles, $20.—2. A. G. Perry, $10.—3. J. B. Burnet, Syracuse, $5.——*Yearlings.*—1. L. G. Morris, Morrisania, $15.—2. S. P. Chapman, $10.—3. Not awarded.——*Calves.*—1. L. G. Morris, $10—2. J. M. Sherwood, Trans. and $3.

Cows.—1. S. P. Chapman, $25.—2. L. G. Morris, $15—3. J. M. Sherwood, $5——*Two years old Heifers.*—1. F. Rotch, Butternuts, $20—2. L. F. Allen, Black Rock, $10—3. F. Rotch, $5——*Yearlings.*—1. Ambrose Stevens, New-York, $15—2. J. M. Sherwood, $10—3. S. P. Chapman, $5.——*Calves*—1. L. F. Allen, $10—2. J. M. Sherwood, Trans. and $3.

DEVONS.

Bulls.—*Over three years old.*—1. R. H. Van Rensselaer, Butternuts, $25—2. R. M. Remington, Sennet, $15—3. Joseph Blakeslee, Westchester, $5——*Two years old.*—1. David S. Earl, Salina, $20—2. H. N. Washbon, Butternuts, $10——*Yearlings.*—1. H. N. Washbon, $15—2. David C. Howe, $10——*Calves.*—1. E. P. Beck, Sheldon, $10—2. H. N. Washbon, Trans. and $3.

Cows.—1. Ambrose Stevens, $25—2. H. N. Washbon, $15—3. E. P. Beck, $5——*Two years old.*—1. L. F. Allen, $20—2. and 3. E. P. Beck, $10 and $5——*Yearlings.*—1. H. N. Washbon, $15—2. E. P. Beck, $10—3. R. H. Van Rensselaer, $5——*Calves.*—1. H. N. Washbon, $10—2. Ambrose Stevens, Trans. and $3.

HEREFORDS.

Bulls.—*Two years old.*—1. Allen Ayrault, Geneseo, $20—2. W. H. Sotham, Black Rock, $10——*Calves.*—1. W. H. Sotham, $10—2. A. Ayrault, Trans. and $3.

Cows.—1. W. H. Sotham, $25—2. A. Ayrault, $15—3. L. F. Allen, $5——*Two years old Heifers.*—1. W. H. Sotham, (for Coquette) $20—2. A. Ayrault, $10——*Yearlings.*—2. W. H. Sotham, (for Jenny Lind,) $10—3. L. F. Allen, $5——*Calves.*—1. L. F. Allen, $10—2. W. H. Sotham, Trans. and $3.

AYRSHIRES.

Bulls.—1. E. P. Prentice, Albany, $25—2. L. G. Morris, $15——*Calves.*—1. E. P. Prentice, $10.

Cows.—1. E. P. Prentice, $25—2. Robert Rone, Mount Morris, $15——*Two years old.*—1. E. P. Prentice, $20——*Yearlings.*—1. E. P. Prentice, $15—2. Robert Rone, $10—3. L. G. Morris, $5——*Calves.*—1. E. P. Prentice, $10.

NATIVE AND CROSS BREEDS.

Cows.—1. David S. Earl, $20—2. S. P. Chapman, $12—3. L. G. Morris, $4——*Two years old.*—1. C. C. Cook, $15—2. D. S. Earl, $10—3. L. S. Bundy, Otego, $3——*Yearlings.*—1. E. Sheldon, Sennet, $10—2. P. B. Williams, $8—3. R. M. Remington, $3——*Calves.*—1. C. Merriman, $3—2. S. C. Parker, Trans.

WORKING OXEN.

Best team of 20 yoke from any county, to Cortland county, $50——*Single yoke.*—1. E. Sheldon, $25—2. John Bryden, $15—3. Hiram Clift, Trans. and $5——*Best trained Cattle.*—J. B. R. Church, Silver Medal.

STEERS.

Three years old.—1. H. H. Eastman, $10—2. E. W. Sheldon $5—3. J. N. Clyde, Trans. and $3——*Two years old.*—1. B. H. Streeter, $10—2. E. W. Sheldon, $8—3. J. N. Clyde, Trans. and $3——*Yearlings.*—1. James H. Sherrill, $8—2. H. Sheldon, $5—3. J. Muir, Trans. and $3.

FAT CATTLE.

Pair of Oxen.—1. L. Doty, $25—2. E. Sheldon, $15—3. Asa Newlan, Avon, $10——*Single Ox.*—1. E. Munson, $15—2. H. Sheldon, $10——*Cow.*—1. Clement Leach, $15—2. Robert Rone, $10——*Pair of Steers.*—1. Robert Rone, $15——*Heifers.*—1. J. Barber, Homer, $10.

Animals fattened on Hay and Grass only.—*Pair of Oxen.*—1. E. P. Beck, $20—2. Israel Boies, Cortland, $12——*Single Steer.*—1. E. Sheldon, $8—2. John Reeves, $3—3. J. B. Burnet, Trans.——*Cows.*—1. Robert Allen, $10.

FOREIGN CATTLE.

Best Hereford bull, L. G. Bingham, Williston, Vermont $25—Best Devon bull, R. C. Gapper, Canada, $25—Best yearling bull, M Bingham, Vermont, $10—Best bull calf, R. C. Gapper, $5.

Best Cow—1. To "Sally," $25, and 2. to "Cherry," $15, both Herefords and owned by L. G. Bingham, Vermont.

HORSES.

For all Work.—*Stallions.*—1. Wm. Ferguson, $20—2. Nottingham & Allen, Palmyra, $12—3. David Osgood, $8—4. O. Howland, Youatt——*Mare and Colt.*—1. Reuben H. Russ, $20—2. Edward Munson, $12—3. Anthony Decker, $8—4. Wm. Price, Youatt.

For Draught.—*Stallions.*—1. Nottingham & Allen, $20—2. Cornelius Schobey, $12—3. John D. Spinner, Herkimer, $8—4. J. B. Thompson, Youatt.——*Mare and Colt.*—2. David Wemple, $12—4. J. H. Lamberson, Youatt.

Blood—*Stallions.*—1. W. W. Huff, $20—2. Clark & Earl, $12—3. Simon Schermerhorn, $8—4. Pardon Austin, Youatt. To "Consternation," owned by J. B. Burnet, Certificate as the best in its class, he having heretofore been awarded the first prize.

Three years old.—*Stallions.*—1. A. Butler, $15—2. E. Moore, $10—3. H. S. Marsh, Youatt—4. Wm. Norton, Trans.——*Mares.*—1. Elias Thomas, $16.

Two years old.—*Stallions*—1. F. Brown, $10—2. R. G. Arthur, Ticonderoga, $5—3. J. Van Hoesen, Trans.——*Mares.*—1. Jacob J. Boshart, $10—2. N. R. Williams, $5—3. J. N. Holmes, Trans.

Yearlings.—*Stallions.*—1. J. Muir, $5—2. J. Hoosenfran, Youatt—3. Nathan Soule, Trans.——*Mares.*—1. W. B. Van Slyke, $5—2. S. A. Gilbert, Youatt.

Matched.—1. H. Gould, $15—2. Thomas S. Clark, $10—3. Amos Lewis, $8—4. H. Otis, $5.

Geldings.—Certificate to Arden Merrill, Rose.—1. H. L. Barker, $10—2. S. S. Vaughn, $8—3. John Legg, $6—4. Nelson Boomer, $4.

Foreign.—*Stallions*—1. L. D. Harlow, Vermont, $20—2. J. Ashford, Vermont, $15—3. Calvin Blodgett, Vermont, $8—4. G. F. Wheeler, Youatt.

SHEEP.

Long Wooled.—*Bucks, over two years old.*—1. Geo. Swails, $10—2. L. F. Allen, $8—3. Charles N. Hudson, $5——*Under two years old.*—1. Thomas Terry, $10—2. Wm. Rathbone, $8—3. C. N. Hudson, $5——*Pen of five ewes, over two years.*—1. Thomas Terry, $10—2. Wm. Rathbone, $8——*Under two years.*—1. Geo. Swails, $10——*Five buck Lambs.*—1. James Bicknell, $8—2. Thomas Terry, Am. Shepherd and $3——*Five Ewe Lambs.*—1. C. N. Hudson, $8.

Middle Wooled.—*Bucks, over two years old.*—1. Z. B. Wakeman, Herkimer, $10—2. J. M. Sherwood, $8—3. L. F. Allen, $5——*Under two years.*—1. J. M. Sherwood, $10—2. Wm. Robson, $8—3. Z. B. Wakeman, $5——*Pen of five Ewes, over two years.*—1. Wm. Robson, $10—2. Z. B. Wakeman, $8—3. J. M. Sherwood, $5——*Under two years.*—1. Z. B. Wakeman, $10—3. E. R. Dix. $5——*Pen of five buck Lambs.*—1. Z. B. Wakeman, $8—2. Wm. Robson, Am. Shepherd and $3——*Ewe Lambs.*—1. Z. B. Wakeman, $8—2. Wm. Robson, Am. Shepherd and $3.

Merinos.—*Bucks, over two years.*—1. N. M. Dart, $10—2. Jos. Blakeslee, $8—3. J. M. Sherwood, $5——*Under two years.*—1. J. D. Patterson, Westfield, $10—2. D. S. Curtis, $8—3. J. M. Sherwood, $5——*Pen of Ewes, over two years.*—1. J. M. Sherwood, $10—2. N. M. Dart, $8—3. Randall & Milliman, $5——*Under two years.* 1. J. Blakeslee, $10.

Saxons.—*Bucks, over two years.*—1. S. H. Church, Vernon, $10—2. S. B. Crocker, Vernon, $8—3. S. H. Church, $5——*Under two years.*—1. S. B. Crocker, $10—2. R. I. Ransom, $8—3. Joseph Haswell, $5——*Pen of Ewes, over two years.*—1. S. H. Church, $10—2. S. B. Crocker, $8—3. Randall & Milliman, $5——*Under two years.*—1. R. I. Ransom, $10—2. S. H. Church, $8—3. Randall & Milliman, $5.

The Hartford Premium.—For this prize of $100, there was but one entry, that of A. L. Bingham, of Cornwall, Vermont, to whom it was awarded.

Foreign.—*Long Wooled.*—To George Miller, of Canada, for best Buck, $10—and also for best pens of Buck and Ewe Lambs, $5 on each——*Merinos.*—Best Buck, to E. Robinson, of Vermont, $10 For best five Ewes, to M. Bingham, of Cornwall, Vt., and to E. Robinson, $5 each. The committee recommend a diploma to L. G. Bingham, fo two Ewes.

FAT SHEEP.

Long Wools.—*Over two years.*—1st. $5, and 2d. $3, to J. M. Sherwood——*Under two years.*—1. Z. B. Wakeman, $5—3. Thos. Terry. Am. Shepherd.

Middle Wools.—*Over two years.*—1st, 2d and 3d, to J. Reeves, $5, $3, and Am. Shepherd.

SHEPHERDS' DOG.

1. To M. Bingham, Vermont. $5.

SWINE.

Boars.—*Over two years.*—2. H. N. Washbon. $5——*Yearlings.*—1. James Gilkeson, $10—2. David Preston, $5—3. B. Williams, $5——*Six months.*—2. C. R. Nichols, $3.

Sows.—*Yearlings.*—2. Franklin Thayer, $3.

Pigs.—1. Rufus Cossitt, $10—2. H. N. Washbon, $5.

POULTRY.

Fowls.—Best Polands, to J. S. Cheselbrough, $3—Best Large fowls, to John J. Boshart, $3—Java Bantams, to E. Platt, Albany, $3.

Muscovy Ducks.—Best, to Charles N. Hudson, $3.

Geese.—Best large, to David Cossitt, $3.

FARM IMPLEMENTS, &c.

Plows.—The committee on Plows are to have another meeting, before they make their decision.

Best Farm Wagon, D. W. Seeley, $5.
Best Harrow, A. H. Fitch, $3.
Best Corn Cultivator, Jeremiah Fink, $3.
Best Fanning Mill, Jacob Clapper, $5.
Best Corn Stalk Cutter, J. C. Rich, $3.
Best Straw Cutter, J. C. Rich, $3.
Best Corn and Cob Crusher, H. L. Emery, $5.
Best Clover Machine. Rapalje & Briggs, Rochester, $5.
Best Ox Cart, Paris Barber, Homer, $3.
Best Horse Rake, R. H. Chase, $2.
Best Ox yoke, Gideon Hotchkiss, $2.
Best Carriage Harness, Moses Cherry, $3.
Best Saddle and Bridle, B. Suit, $2.
Best Churn, E. R. Dix, $2.
Best Dozen Axes, D. R. Barton, Rochester, $2.
Best Cheese Press, L. Raymond, $2.
Best Grain Cradle, Chas. Clow, $2.
Best Six Hand Rakes, H. L. Emery, $2.
Best Six Hay Forks, J. Vanorman, $2.
Best Six Grass Scythes, H. C. White, $2.
Best Six Cradle Scythes, Rapalje & Briggs, $2.
Best Six Manure Forks, Rapalje & Briggs, $2.
Best Hay Rigging, J. N. Ransom, $2.
Best Six Dozen Corn Brooms, G. W. S. Brownson, $2.
Best Horse Power, L. B. Benton, Penn Yan, $5.
Best Threshing Machine, B. G. Hathaway, $10.
Best Seed Planter, Rapalje & Briggs, $3.
Best Wheat Drill, Aaron Palmer, Diploma.

Best Grain Drill, with apparatus for depositing the manure, Henry Hoffman, Diploma.

Best Broad Cast Sower, Silas S. Sage, Diploma.
Best Wheat Cultivator. D. B. Rogers, Diploma.
Best Portable Saw Mill, H. L. Emery, Diploma.
Best Corn Sheller for Horse Power, H. L. Emery, Diploma.
Best Corn Sheller for Hand Power, Harris & Carter, Diploma.

Best Show of Agricultural Implements, Rapalje & Briggs, Diploma and $20.

Best Show of Agricultural Implements made in the State, by or under the supervision of the exhibitor, E. J. Burrall, Geneva, Diploma and $20.

The collection of Implements by H. L. Emery, are recommended to the Society as worthy of special notice, for their excellent quality and finish.

H. E. Smith, for Horse Power, Diploma.
Best Saddle, R. T. Norgrove, Syracuse, Silver Medal.
Sausage Meat Cutter, Burdick & Cushing, Diploma.

PLOWING MATCH.

1. To E. Davis, Watertown, $10—2. W. G. Brainerd, Rome, $8—3. Samuel Phillips, $6—4. H. D. Preston, Elbridge, $5.

The last volume of the Transactions of the Society, was awarded to Samuel Lyderman, Geneva; Enoch Marks. Onondaga; O. Howland, Owasco; Thomas Miller, Homer; J. F. Maher, Clay; Wm. Miller, Onondaga; Robert Taylor, Skaneateles; Thomas Mix, Auburn; N. Kniffen, Scipio; John Baker; J. Porter, Onon. Hill; J. T. Hill, Lenox; Wm. Heming and John Morris, Onondaga.

CHEESE.

100 *lbs. less than one year old.*—1. R. D. Brown, Fairfield, $15—2. P. Carter, Lysander, $10—3. Samuel Mathews, Litchfield, $5—4. James P. Hitchcock, Truxton, Trans.

Messrs. Dolph & Barber, of Richmond, Ohio, exhibited a lot of "English Dairy" Cheese, very fine, for which they were awarded a Diploma.

BUTTER.

For the best and largest quantity, made from five cows in thirty days, to Nelson Van Ness, $25—2. To John Holbert, $15.

Made in June.—1. John Shattuck, $10—2. John F. Clark, $5—3. Abram Adams, Trans.

Made at any time.—1. Horace Clapp, $15—2. John Holbert, $10—3. John Shattuck, $5—4. Noah Hitchcock, Jr., Trans.

Made by Girls.—1. Miss Bardwell, Otisco, Silver Milk Cup—2. Misses Van Ness, Mayville, pair of Butter-knives—3. Miss M. E. Hopkins, Cortlandville, set of Tea-spoons.

MAPLE SUGAR.

1. Peter Mitchell, $10—2. Charles W. Taylor, $5—3. Luman Shepherd, $3—4. E. R. Dix, Trans.

DOMESTIC MANUFACTURES.

Woolen Blankets.—1. G. W. Henry, $6—2. Mrs. B. R. Voorhees, $4—3. N. M. Coburn, $2.

Flannel.—1. G. W. Henry, $6—2. Chester Clark, $4—3. C. Lawrence, $2.

Woolen Cloth.—1. W. Baker, $10—2. Mrs. Voorhees, $8—3. S. W. Abbott, $3.

Woolen Carpets.—1. W. E. Talman, $10—2. J. Conger, $8—3. S. Goodell, $3.

Rag Carpet.—1. A. A. Sweet, $5—2. Caroline Tice, $4—3. Betsey Hoffman, Trans.

Hearth Rugs.—1. E. Sheldon, $5—2. Misses J. and M. Robb, $4—3. Miss J. M. Lathrop, $3—4. Mrs. H. Wier, $2.

For pair Kersey Woolen Blankets.—To Mrs. J. W. Collins, $4.

For Double Carpet Coverlids.—1. Wm. Wright, $5—2. L. T. Marshall, $4—3. Wm. Wright, $3—4. Mrs. H. Wier, $2—5. J. E. Dijderman, Trans.

For 15 Yards Kersey.—1. and 2. Mrs. J. Harrold, $5 and $4—3. Mrs. H. Wier, $2.

For Knit Woolen Stockings.—1. H. B. Lawton, $2—2. Horace Clarke, Trans.

For Wove Woolen Stockings.—1. Mrs. J. B. Noyes, $2—2. Mrs. S. H. Church, Trans.

For Woolen Fringe Mittens.—1. C. Lawrence, $2—2. H. Clarke, Trans.

For Pair of Gloves, to Mrs. J. P. Noyes, Diploma.

For Pair Lady's Mittens, Mrs. L. T. Marshall, Diploma.

For Buckskin Mittens, very superior, to Z. & W. Case, Gloversville, Diploma. (*To be continued.*)

Corn Fodder and Pumpkins.—J. H. Jenne, in the Boston Cultivator, says that two cows, in fine order, fed on corn-fodder, and with each a large pumpkin a day, gave fourteen quarts of milk per day. When the corn-fodder and pumpkins were gone, they were fed on good hay, when they fell off to seven quarts per day.

Hens eating their eggs.—Hens, it is well known, when kept shut up, are very apt to eat their eggs. The best preventive is to keep them well supplied with lime and gravel, and with *meat* in some form. The nest should be so deep in the boxes that they cannot reach them while standing on the edge.

Barley.—Myron Adams, of East Bloomfield, N. Y., states that nine premium barley crops have been raised in that township in the last six years; the greatest 69 bushels per acre, the least, 48¼ bushels; the average, 59½ bushels; the average cost, including interest on land, $10; average price, 50 cents; average nett profit, $14 per acre. They all grew after well manured corn; the amount of seed sown, in nearly every case, was 3 bushels per acre.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

North American Pomological Convention.

This body held its sessions on the day following the close of the State Fair, and was organized by the appointment of Dr. J. A. Kennicott, of Illinois, as President, and F. R. Elliott, of Cleveland, and B. Hodge, of Buffalo, as secretaries, with a vice-president from each of several different states.

A committee of five was appointed, consisting of Dr. Wendell, of Albany; Dr. Kennicott, of Illinois; Charles Downing, of Newburgh; Benj. Hodge, of Buffalo, and Prof. J. J. Mapes, of New Jersey, to confer with a similar committee to be appointed by the approaching Congress of Fruit Growers, to effect a combination of the two national organizations into one, and promote uniformity in Pomology.

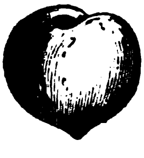
Most of the time of the convention was occupied with the discussion of the merits of the different fruits, and their adaptation to the various localities of the northern and western States. This discussion possessed much interest, and many valuable facts were elicited, of which we may have space another month to present a condensed report.

The Convention continued but a single day, and was more numerously attended than the former one at Buffalo, but much less so than the American Congress of Fruit Growers last autumn. A good collection of fruits was exhibited, but smaller than usual, from the unfavorable season, and from the decay and bruising consequent on their previous exhibition at the State Fair.

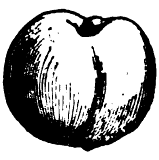
Among those who took the most active part in the discussions of the convention, were, C. M. Hovey, Boston; N. Goodsell, P. Barry, Rochester; W. R. Coppock, B. Hodge, A. Bryant, Buffalo; Dr. Kennicott, Illinois, H. P. Bryam, Kentucky; David Thomas, Aurora; J. W. P. Allen, Oswego; C. Downing, Newburgh, and others.

Early Peaches.

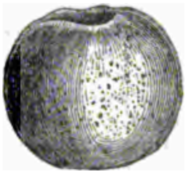
The similarity in size and form has always presented a serious difficulty, in distinguishing by description, some of the most celebrated varieties. There are, however a few of the early varieties that are quite strongly marked in their external appearance, some of which we here figure, reduced accurately to one half their usual diameter, and which well exhibit the relative sizes and forms of these sorts.



Yellow Nutmeg.



Early Anne.

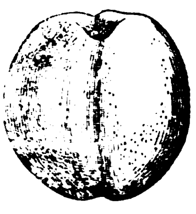


Early Tillotson.

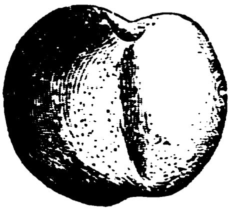
The Yellow Nutmeg is quite small, and a very moderate bearer, ripening about one week before the Early Anne. It is a very free grower, in which respect it differs from the Early White Nutmeg, which is smaller and earlier, and from the Red or Brown Nutmeg, and also from the Early Anne. Its flesh is deep yellow, and of good quality. It appears not to be described in the books, unless it is the "*Early Yellow Nutmeg,*" mentioned in the Catalogue of the London Horticultural Society. Its flowers are medium or rather large, and its leaves bear reniform glands.

The Early Anne is small, often nearly medium in size, greenish white in color, of pleasant flavor, and were it not for its slow growth, and great liability to injury by the cold of winter, would be of great value. It is a very moderate bearer. *Fay's Early Anne* is a hardy free growing variety, twice the size of the old variety, but is a few days later, ripening a little before or with the Tillotson. It furnishes an agreeable variety among very early peaches, differing in its flavor from the other sorts of the same period. After three years fruiting by the writer, it has uniformly proved a very pleasant and good peach.

The Early Tillotson is full medium in size, deep red, high-flavored, and a great bearer. It often ripens, as far north as 43 degrees of latitude, by the 10th of 8mo. (Aug.) The mildew which covers the leaves of the young trees, towards the close of summer, is an objection, especially among nurserymen, with whom a rapid handsome growth is of great importance. It succeeds finely throughout the Southern States, where it ripens sometimes the first week of summer.



Serrate Early York.

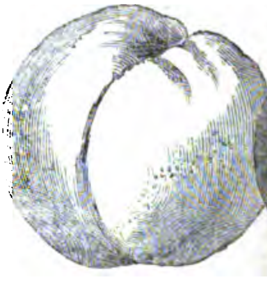


Large Early York.

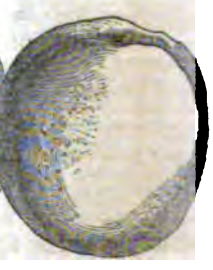
The Serrate Early York, (known also as "True Early York," "Early York of Downing," &c.) is a little larger than the Tillotson, deep red, and ripens at the same time; and by most persons is considered fully equal in flavor; while the growth of the young trees is rather more vigorous, and nearly or quite free from mildew. Its oval form, early maturity, glandless leaves, and large flowers, distinguish it from all other varieties of its season.

The Large Early York is quite distinct, being ten days later than the preceding, larger, round or rather oblate in form, and bearing glandular leaves and small flowers. Its form, though very different from the Serrate Early York, does not distinguish it from several other sorts, of nearly the same season, as for instance the *George the Fourth*, *Walter's Early*, *Grosse Mignonne*, &c.

Passing several fine varieties which ripen within a few days of each other, such as *Cole's Early Red*, *Early Royal George*, *Cooledge's Favorite*, *Bellegarde*, *Early Newington*, &c., we come to two very large and showy yellow peaches, rather early or medium in season, distinguished by their popularity in market, viz:—



Jaques Rareripe.



Early Crawford

Crawford's Early, or *Crawford's Early Melocoton*, quite large, very handsome, and peculiar for its *true* *oval* form, which in very finely grown specimens nearly approaches globular. Although not of first rate quality, its great size and beauty have nearly placed it at the head of the list of market peaches. F. R. Elliot, of Cleveland, stated at the Buffalo Fruit Convention, that he had raised specimens measuring ten inches and a half round.' Further north, it does not grow so large.

Jaques' Rareripe is a yellow peach, with a red surface, of the largest size, usually exceeding Early Crawford as far north as New York and New England. Its quality, though good, not of the highest character.

Roses.

Extracts of Letters from David Thomas, *near Aurora, Cayuga Co.*

New Seedling.—" Two or more years ago, I found a little seedling rose under the Champney, and transplanted it into a more roomy place. Last season, one shoot grew about 12 feet,—a perfect trailer,—and two shoots this year may extend 15 or 20 feet each. The flowers are in clusters, a light pink color, very double and beautifully formed. Like the Champney, however, it is rather tender, and will require to be laid down and covered with evergreens in winter. It opened yesterday for the first time, and we are all delighted with it. It is the smallest of all roses in my collection, which adds to its interest." 6 mo. 23, 1849.

Prairie or Michigan Roses.—" Our *Chillicothe* rose is much later than the other kinds, and will not be in bloom for some days—while the other four,—*Queen of Prairie*, *Baltimore Belle*, *Pallida*, and *Caradori Allan*, are in their glory. The *Queen* crowns the post *through* which it is fastened,* and some have thought it the finest object of the kind ever exhibited. As the flowers are not much clustered, they resemble little bells, but cover up the post completely. This circumstance is of much importance, and in training ought never to be forgotten, otherwise the post may appear like a tree with a dead top. The *Baltimore Belle* has its flowers in masses, and is not so picturesque on this account. *Pallida* has the best shape, but I fear is not sufficiently rampant in its growth for pillars. *Caradori Allan*, only semi-double, is more of a rose color than the others, grows rampantly, and will cover up the post. Professor Jackson said last year that none of his made a finer appearance, if so fine. Its flowers, like the *Queen*, are not much clustered, which is a great advantage. The *Chillicothe* also has a great growth, and we have one more than a foot higher than the post, and will soon be glorious.

" My *new seedling* has been admired, but like the *Greville* and *Laure Davoust*, is rather tender. I think it not quite so fine, however, as the two last mentioned. If these were hardy, nothing could exceed their splendor." 7mo. 6, 1849.

Layering Roses.—" Col. Young's method was to bud the new kinds on a thrifty shoot, and the next season when they started to grow, to lay them in a trench, earth them, and let them root. This plan is excellent for such as grow without flowering that season; but such as bloom abundantly, will rarely root, and often perish. In this way, I lost Fanny Parisot, Prince Albert, and others. I am now trying if destroying the blossom buds will not cause them to root, by stimulating the branches, as flowering is a very exhausting process. But I am carrying the experiment further. Pruning judiciously will often cause new sprouts to supply the want of foliage that the plant has lost; and whenever this takes place in a layer, it is strongly stimulated to strike new roots. Indeed, we may lay it down as a *general rule*, in respect to layers, that the growth of the root will be proportionate to the growth of the branches. To encourage this growth, the ends of the layers ought to be left as erect as possible." 7mo. 6, 1849.

" I find in making layers of rose shoots of the present year, that they are very impatient of slight injuries; and therefore it is best to bend down the stem into which the buds have been set, soon after vegetation commences, and the young shoots will be more erect. There is also an advantage in *beginning to earth* them early, as the bark is prevented from becoming rigid, and the fibrous roots from the base of the new stems will more readily strike." 6mo. 23, 1849.

Pillar Roses.—" I cannot discover many roses besides the Michigans, the Boursalts, and the Ayrshires, that are suitable for tall pillars *in this climate*. The Multifloras, indeed,—including the Greville and Laure Davoust,—on account of their not abiding our winters without protection, may be trained on the ground by moderate pressure, such as a flat stone or a block of wood,—covered with litter or evergreens, and then raised up and fastened to the post in spring, not omitting to wind them round it. *Hybrid Blanche* and *Watt's Celestial* show quite an aspiring disposition. But several others which I procured for this purpose, are totally unsuitable for this northern land, though they may do well three or four degrees further south. Of this kind is *Cora L. Barton*, *Solfaterre*, *Sandeur Panache*, *Madame Desprez*, and *Gloire de Rosamene*; I have not perceived any climbing tendency about them.

" I have learned something since last year in regard to training pillar roses. I began by passing the stem through the hole in the post, and then forming a considerable curve before it entered the hole next above, like a person with arms a-kimbo; but when they came into bloom, the appearance was not fine, but rather discordant to taste. Much of the post was not concealed; and when the top was bare, it reminded me of a dead topped tree. I now therefore wind each stem closely round the post—say once in three or four feet, and then pass it through a hole to prevent it from falling. In this way, and in consequence of the lateral branches of the next year, which bear the blossoms, the post will be covered up and concealed, while it will be thickly clothed with bloom from top to bottom, and be literally *a pillar of roses*."

Soils for Pears and Peaches.

Eds. Cultivator—A reader of the *Cultivator* requested me to say through the medium of your paper, what soil I considered the most suitable for the pear and peach; as he appears to have a variety of soils, I would say most pears require a strong loam; the Skinless pear does better on clay land; the Bartlett does well on a variety of soils; Mire Joannette, Madeleine Dearborn's Seedling, Bloodgood, Winter Nellis, Beurre d'Aremberg, Virgalieu, and many more might be named, that will do well on rather light soil if made rich. The Beurre Diel requires a rich close soil.

The peach with me, does best on black gravelly loamy soil. The White Imperial requires a more retentive soil than most peaches; the Earl Tillotson, Early York, Red Rareripe, and Beckwith, require the loam. The Beckwith Peach originated here, and all things considered, is the best peach for market we possess. For light sandy soils, Walter's Early. The planting season is now drawing near. S. Worden. *Oswego, Sept. 3rd*, 1849.

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* See Fig. and description of this mode of making pillars of roses, in last No. of the Cultivator.

Fruit Culture at the South.

CUTTINGS.—Suffer me to give you what we regard in this latitude, 37½°, to be facts, as regards "propagation by cuttings."

I have grown, and can show at this writing, the pear, peach, and plum, growing from cuttings in the open air. I grew last season quite a number of the pear, the cuttings being used as temporary stakes to hold labels; some of them grew to a size of half an inch, and full 4 to 6 feet high. I have seen the apple grow in the same way. I have seen an orchardist at Vicksburg grow peach trees—but only a few—from cuttings.

A favorable season is all that is needed. The past was quite a moist one, though no great quantity of rain. Cuttings do not succeed so well when very deep; they damp off,—taking a kind of dropsy.

I have tried plums and peaches a few times, but my situation was not favorable. Cape Jasmine will not grow here from cuttings; but with some persons they grow as readily as willows do.

I do not think any person can feed himself at making trees from cuttings of the apple, peach and pear; but they will grow sometimes.

[At the north, all experiments of the kind uniformly fail, unless performed with the increased heat and moisture obtained under glass. At the south, the atmosphere of damp seasons more nearly approaches that of a hot-house, and consequently proves more favorable to the growth of cuttings, &c. ED.]

GRAFTING THE PEACH AND NECTARINE.—In February, 1848, I grafted some six varieties of the nectarine, and lost, probably, one in twenty-five; the grafts were sent to me some 75 miles, by steam and its detentions. I have grafted the peach upon plum and peach for two years, and upon pieces of roots for one year; and have as large and thrifty trees grafted in January and February, as those budded the previous summer, with a growth of two feet the same season.

STAKING TREES.—I never advise a stake. Head down newly planted trees to one foot, or two or three or four feet, according to size, cut branches well in, and no wind will disturb them. Stakes are troublesome; and, when neglected, do a wonderful sight of harm. In 1845, I put my gardener (a Dutchman,) and my servant (a carpenter,) to staking my trees—peaches; the next spring they were rubbed, and bruised, and injured so greatly, that I had to cut down many of them. They are the last that I staked, and I have planted out 2,000 since.

[The very rapid growth of newly transplanted trees at the south, renders large size a matter of less importance,—in the view at least of most cultivators,—than at the north; and hence staking becomes less needful. But even here, trees of moderate size, with the shoots well shortened-in at the time of removal, which should in no instance be omitted, rarely need staking, *if the roots have been taken up of good length.* Such trees may be protected from the motion of the winds through winter, if set in autumn, by a conical mound of earth, a foot high round the stem. But in cases, where trees are so large, or the roots so much shortened in digging up, that they cannot withstand the force of the winds, staking becomes quite essential, and all danger of chafing the bark must be precluded by firm straw bands. ED.]

TRANSPLANTING.—I do not transplant as is usually done. I precede the planting by either breaking up new land entire, or throw 6 or 8 furrows together, with a two-horse plow; and if the land is hard, I follow with another plow. Thus I save much labor in digging holes.

Is it not bad policy to make a hole 2 or 3 feet deep in a tough clay? Will it not hold water, and prove injurious?

In January, 1848, I dug out 2 feet deep, a trench 5 feet by 90, for asparagus; the best manure and rich soil from the woods were turned in, all mixed well, and planted with the roots; they grew extraordinarily. This year there cannot be one fiftieth remaining. Why? I think the clay retained all the winter water, and rotted the roots. My garden is upon a clay subsoil, and holds water like a jug. Next season I shall drain it.

I have now over 40 acres of fruit, embracing about 160 varieties of peach, 175 pear, 75 apple, 30 plum, 10 or 12 apricot, 8 or 10 nectarine, 3 quince, 6 figs, &c. &c.; my object being to test in the south. I shall continue gathering for a few years, and then cut down [all but the best] and throw into the fire. M. W. PHILLIPS. *Edwards, Mississippi.*

Stoddart's Washington Alpine Strawberry.

Many of our readers have heard of the great fame of this variety in time past, most of whom are aware that those who have tried it, regard it as a great imposition upon the public. The following remarks from *the Horticulturist*, not only place the subject, as we believe, in its true light, but also afford some valuable hints for the successful culture of the strawberry:—

"Two points must be understood, to grow the best strawberries: 1st, that the soil must be deep; and 2d, that it must be rich. If you look at the leaves of a strawberry, and, because they are not very large, presume that the roots will extend but little depth, you are greatly mistaken. I have seen the roots of strawberries extend five feet down in a rich deep soil; and those plants bore a crop of fruit five times as large, and twice as handsome and good, as the common product of a soil only one foot deep.

"And this reminds me of a capital instance of *strawberry delusion*, which most of your readers doubtless know something about, but which many even yet do not, perhaps, fully understand. I mean the history of the 'Washington Alpine Strawberry,' which Mr. Stoddart, of western New-York, advertised and sold a great many dollars' worth of, some four or five years ago. Mr. Stoddart, I believe, was quite honest in the transaction; and yet the whole public were completely deluded by the 'Washington Alpine,' which was nothing but the old Alpine or monthly strawberry. The long and short of the matter was, that Mr. Stoddart had a corner of his garden which was *made ground*,—a rich deep moist soil, (I think it had been an old bog, or bit of alluvial, afterwards filled up,) not less than 8 or 10 feet deep. Mr. Stoddart had raised some seedling Alpines, (which, so far as I know, always come the same from the seed;) he had by lucky chance planted them in this corner of his garden, where the soil was so unusually rich and deep. There they grew so finely, and bore such enormous crops, that his neighbors could scarcely credit their senses. The story of the miraculous crop got into the papers. People came to see with their own eyes. In short, they bought and carried away the 'Washington Alpines,' at extravagant prices, with the full conviction that 'seeing is believing,' and that such strawberries were never before grown, gazed on or tasted. Well, great was their surprise to find, on planting and cultivating the 'Washington Alpines,' that there was nothing new or wonderful about them; and that, in fact, they all dwindled down to the old fashioned Alpine strawberry. Mr. Stoddart, naturally enough, now has as many hard names bestowed on him for the fancied deception as he had before had hard dollars for really great crops. And yet, Mr. Stoddart sold his plants in good faith, and was probably as much deluded as the buyers. The whole secret of his unheard of crops, and the large size of his fruit, lay in the depth and richness of his soil; and as none of his customers had, like him, a rich ten feet mould to grow giants in, they had no 'Washington Alpines.'"

Notes on Apples.

Extracts of Letters from David Thomas, *near Aurora, Cayuga Co.*

We have been trying the *Broadwell* from Ohio, and it has been much admired. It greatly resembles the Bough, and some have proposed to call it the Winter Bough. Some of us have thought it the best sweet apple we have ever tasted *in winter*. 2 mo. 4, 1849.

The Wagener. Two persons from Penn Yan, well acquainted with this apple, both represent it as the best they ever tasted, and speak of its *tenderness* as a remarkable quality, and state that it is good if gathered even before it is full grown.

Domine. Perhaps I have no apple in my collection so perfectly *crisp* as the Domine. It seems not to have lost a particle of moisture since it was gathered from the tree. There are small dead spots just under the skin; but whether this defect is *accidental* or *characteristic*, I do not know.* It has a very superior flavor, but it is hardly *intense* enough. If we could increase it, it would be the best apple that I know. 2 mo. 10, 1849.

The Jonathan is better than it was a few weeks ago, because riper, and at this time I prefer it to the Spitzenburgh, which has rather deteriorated. 3 mo. 15, 1849.

Manning's Green Sweet is *dry* and *crumbly;* keeps well, but is scarcely fit for the table.

Domine remains remarkably without withering. It seems to have lost no moisture. Its flavor is very agreeable, though too much *diluted*. 3 mo. 15, 1849.

Peck's Pleasant bears every year, and is always free from the smut (lichen) on its surface. Its muskiness renders it more acceptable to some, and it is a very rich fruit besides. A gentleman lately, while eating one, pronounced it superior to all other known apples. Mid-winter appears to be the period of its greatest excellence. When kept in a warm place, the skin has generally become embrowned; but perhaps this may have arisen from white frosts before the apples were gathered. They do not keep as well as the *Swaar*. P. S. They appear to have been injured by frost on the tree,—because on one side (the most exposed,) they are injured to the depth of a line or more, while they are nearly or quite free on the other side. From this circumstance, it would seem that they ought to be gathered early.

6 mo. 1, 1849. Our two best keeping apples at this time, are the *Jonathan* and *Golden Russet*. [Not the Am. Golden Russet or Bullock's Pippin.] They also retain their flavor well, especially the latter.

Red Astrachan. This is the best very early apple for cooking in my collection, and I doubt if we have any *late* one that is equal to it for this purpose. Every freeholder that has room for a tree, ought to have at least one of this sort; and having proved its value, he would not be easily tempted to do without it. Even in this unfavorable season, the fruit is very fair; but it is too acid for the dessert. 8 mo. 15, 1849.

Rose Bugs.—We observe a successful recommendation in some of the papers, of a mode of protecting rare and valued sorts of roses from rose bugs, by means of cheap gauze or other fine netting, placed in the form of a bag over the bush.

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* Doubtless only occasional. Ed.

Horticultural Items.

Pears on Apple Stocks.—There are very few varieties of the pear which will succeed well on apple stocks, and those few are by no means attended with invariable success. A neighbor has found no pear to grow better when grafted or budded into the apple, than the Vicar of Winkfield, few failures occurring, and the young trees growing vigorously. The following statement, however, from the editor of the New England Farmer, shows the importance of not hastily adopting this mode of raising the trees:—"We have a scion of the Vicar of Winkfield pear that has been growing five or six years on an apple tree. *The fruit is always hard and never ripens.*"

Raising Onions.—S. Williams, of Waterloo, N. Y., states in the Gen. Farmer, that the best way to obtain early onions, is to "plant the black seed after the summer drouths are over, take them up in November and put them in the cellar—and in April set them out in beds. They will soon mature, and are much better than what are called top-onions. If you have a few small onions in the ground all winter, they will come forward very early in the spring, and may be eaten as a salad, tops and all."

Table Grapes at Cincinnati.—The report of the Hamilton County Agricultural Society in Ohio, states that not less than 500 bushels of Catawba and Isabella grapes were sold at Cincinnati during the past season, for "table use." The price was three to four dollars per bushel.

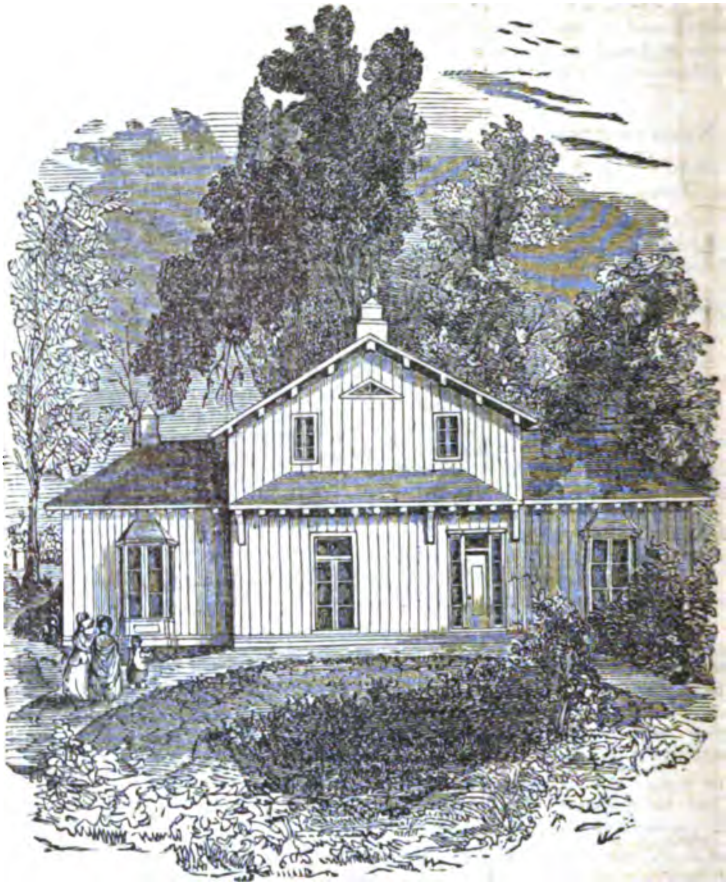
Strawberries—230 bushels per acre.—The Horticulturist states that a cultivator at Newburgh raised in 1848, on a bed measuring ten feet by twenty, *thirty-four quarts* of Hovey's Seedling strawberry, or at the rate of 230 bushels per acre. The soil was trenched two feet deep, very heavily manured from the stable, and subsequently with poudrette, with some ashes and salt. The whole was worked over two or three times; the plants were set out in the spring of 1847, and the crop gathered in 1848.

In the latter part of summer 1847, the bed was enlarged to 24 feet by twenty, by the addition of Swainstone Seedling and Black Prince, with similar manuring. In 1849 the whole bed (including the Hovey's) bore about 80 quarts, or over 200 bushels per acre. The editor of the Horticulturist states that at least *four times* as much manure was used as is usually employed in preparing strawberry beds.

Peaches at the South.—M. W. Phillips, of Edwards, Miss., in a communication to the Horticulturist, says that the two best very early peaches at that place are the *Tillotson* and *Serrate Early York*. They ripened the present year about the 6th of 6th month (June.) The Tillotson proves to be of healthy and rapid growth, and bears better than the Early York, which is rather preferred in flavor, but is liable to rot. *Cole's Early Red* proves to be a fine peach, but inferior to the others.

Black Prince Strawberry.—James Dougall, of Amherstburgh, C. W., says that with him the plants of this variety are quite hardy and resist both cold and heat; and that on his soil it is more than twice as productive as Hovey's Seedling. The Cincinnati Hudson is the strongest grower he possesses, and is by far the most prolific bearer.

Salt as Manure.—The editor of the New England Farmer says, "Corn and beans have flourished well where we have planted them on lands overflowed by salt water at the time of high tides in the spring and fall; but on the same lands potatoes were inferior just as far as the salt water extended."



CHEAP COUNTRY HOUSE

Rural Architecture.

Cheap Country House.

The accompanying plan of a house was designed by Mr. F. R. Elliott, of Cleveland, Ohio, and received a diploma and silver medal from the New-York State Agricultural Society, at its January meeting, 1849. We copy the cut, and Mr. E.'s description, from the Society's last volume of *Transactions:*

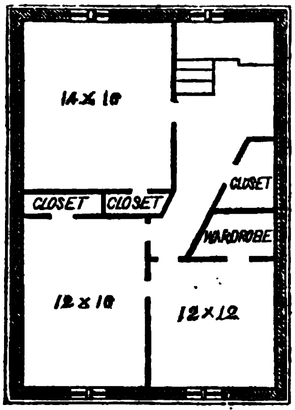
The building is particularly designed to point either north or west, and should, if possible, be placed upon a slight rise of ground from the adjoining public highway, or surrounding grounds.

The value of land in the country, as compared with the disadvantages of basements for kitchens, etc., should not receive a thought, and while this plan may be said to cover a large area of ground, I trust to be able to show that it can be built for a much smaller amount of money, than any plan of equal convenience, room and character yet published. A free circulation of air, connected with large and convenient rooms, are material points, and in this they may be had. The size of cellar may be according to the wishes of the builder, but my estimate and plan is for a cellar only under the wing in which is the kitchen, that being of size sufficient to hold all vegetables, etc., that will be required for the consumption of a large family. Vegetables for stock should, for easy access in feeding, as well as the injurious effects sometimes resulting from a too large quantity stowed in the house cellar, always be confined to the barn cellar.

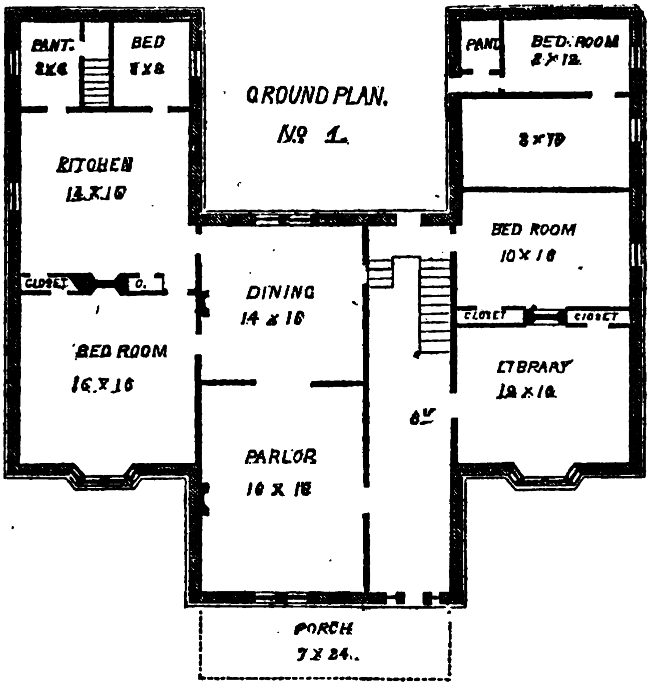
The main house is 24 by 32 feet, with 18 feet posts, and having a porch 7 feet wide in front, supported by brackets. The wings are each 16 by 40 feet, with 11 feet posts, and falling back 12 feet from the front of the main building. Of the first story front, the main building has a single panel door, and one large window, opening each way inside upon hinges. The wings have each an oriel or bay window, projecting one foot, and having the centre lights of glass hung upon hinges, to open inside. The second story front, the two windows like the one below, are divided by a heavy style, and open inside. The covering, as indicated in the eleva- is to be of inch pine boards, that have been run through a planing machine, and cut to a width and thickness. These battened with half inch stuff, three inches wide. As the lower story of the main building, as well as wings, are all designed to be 11 feet high in the clear, it is evident that the best length of boards will be 12 feet, as they will allow of no waste.

The estimate of cost here given is for plain but good work. No mouldings, turnings or carvings, as all such only add to the labor of the housewife in keeping them clean, and are really no ornament, as taken in keeping with the other articles usually accompanying the country.

The fire place in the parlor is designed to be carried to a level with the chamber floor. and then carried ho-



SECOND FLOOR
No. 1.



rizontally along the side of wall until it reaches the partition of chambers, when it may rise diagonally to the centre. Some may prefer a sheet iron flue, which could, like a stove pipe, be removed from the chamber during the summer months. Some may prefer to have the chimney rise direct, as tending to break the uniformity, which, by the way, seems among architects of the present day to be more the intention in their designs, than to give positions suited to the real wants of daily life.

That my estimates of cost are correct, I can only say that they are such as I have contracted in building this house, and are therefore reality, and not fiction or supposition.

Estimate of Cost.

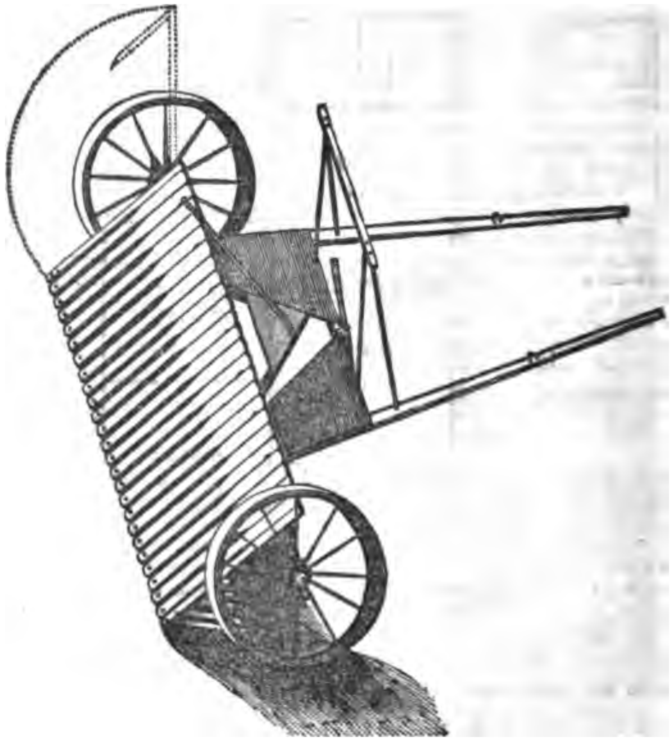
1,000 feet hewed timber, at 2c.,	$20	00
4,134 " inch pine boards, planed, 10½c.,	44	65
4,100 " roof boards, at 7c.,	28	70
1,200 " ½ inch, for battings,	12	60
500 " 1½ inch, second clear, at 13c.,	6	50
200 " 1¼ " " say,	3	00
182 " 1½ " for water table,	1	75
21,000 shingles, at $2.50,	52	50
968 feet, or 66 pieces, 4×4 scantling, 11 feet long; 320 feet, or 24 pieces, 10 feet long; 171 feet, or 8 pieces, 16 feet long; 168 feet, 3×4, 14 feet long; 576 feet, or 32 pieces, 2×4, 18 feet long; 880 feet, or 80 pieces, 2×4, 11 feet long; 176 feet, or 16 pieces, 2×4, 11 feet long; 184 feet, 2×4, long as possible; 118 joists, 3×8, 16 feet long; 16 joists, 2×8, 10 feet long; 54 joists, 16 feet long—for ceiling joists. Estimate all the scantling at,	50	00
Joiner work, to frame, enclose, make sash, &c.,	200	00
Glass and putty for windows,	20	00
Nails,	15	00
Door and window swings,	10	00
	$464	70
This is exclusive of the cellar wall and underpinning, which, with the chimneys, may be (inclusive of materials,) made for,	125	00
Flooring,	20	00
Inside joiner's work and lumber,	150	00
Lath and plastering,	200	00
	$959	70
Extras,	40	30
	$1000	00

This of course, does not allow for the digging of cellar or hauling of lumber;—that must be calculated according as the distance is far or near.

A green-house is, of course, extra; but if the house fronts to the north, it might be constructed, in rear of the dining-room, at a small expense—say thirty dollars. The front wall would of course, be all required, and that should or could be done with four-inch scantling, let into a sill of six by eight, boarded on each side, and filled with saw-dust or tan-bark;—the sash and roof being most of the expense. The heat could be taken from the kitchen, if a stove was there used.

Ancient Price of Agricultural Labor.—In the year 1352, the 25th of Edward III., wages paid to haymakers were but 1d. per day; a mower of meadows 3d. a day, or 5d. an acre; reapers of corn, in the first week in August, 2d.; in the second, 4d. per day; and so on until the end of the month, without meat, drink, or other allowance, finding their own tools. For thrashing a quarter [about nine bushels] of wheat, 2½d; a quarter of beans, peas, barley, or oats, 1½d. By the 13th of Richard II., in the year 1389, the wages of a bailiff of husbandry was 13s. 4d. a year, and his clothing once during that period at most; a carter, 10s.; shepherd 10s.; ox-herd, 6s. 8d.; cow-herd, 6s. 8d.; a day laborer, 6s.; a driver of ploughs, 7s. In 1444, the 23d of Henry IV., the wages of a bailiff of husbandry were 23s. 4d. per annum, and clothing to the price of 5s., with meat and drink. In time of harvest a mower had 4d. a day, and without meat and drink, 6d.; a reaper or carter, 3d. a day—without meat or drink, 5d.; a woman laborer, and other laborers, 2d. a day—without meat or drink, 4½d. a day. By the 11th of Henry VII, 1696, there was a like rate of wages, only with a little advance.

Time of Cutting Hay.—John H. Garnet, of Va., cut 75 stalks of timothy grass immediately after "the dropping of the bloom," and again 75 when the seed was fully ripe; both were of the same length, and cured alike. The greenest cutting was found to weigh 121 grains more than the other.



77—INDEPENDENT HORSE RAKE.

The Farmer's Note-Book.

Independent Horse Rake.

This rake was patented by **Calvin Delano**, of East Livermore, Maine, Feb. 27, 1849. It is fitted to the wheels of a single horse wagon, and tended by a man or boy, who can stand on the platform, forward of the rake, drive the horse and gather the hay with certainty and ease. By placing the foot on a lever attached to the axletree, the hay is discharged in winrows. Each tooth acts separately and independently, its head being suspended on a rod or hinge, over the axletree, one tooth being attached to each head. It is applicable to rough and smooth land, and applies with equal pressure on each kind of surface.

This rake has been considerably used in Maine, and several of the best farmers in that state have given certificates expressive of their satisfaction with its operation. For particulars address **R. H. Chase**, Albany,

Rust, Osage Orange, &c.

Eds. Cultivator—I do not propose to instruct any one, but as you do not often hear from this part of the country, it may not be out of place to allude to a few items of consequence here.

Rust.—In common with most parts of the Great West, we have been visited with this malady. Never, in this county, and perhaps I may add in this part of Ohio, as well as in the adjoining counties of Virginia, has there been more wheat in the ground, rarely has it looked better, and probably, in no previous instance, have we counted with greater assurance upon the avails of this crop—than this year. Yet almost in a day, our crops were cut off, and some of the most promising fields in the country have not been cut. There will not, with us, be more wheat threshed than was sown. It is not so bad every where, and we are glad of it.

We have not yet been informed of either the true cause or adequate remedy; but are resolved to try again; sow less ground and prepare it better.

The Mediterranean seems to be the favorite variety here, at present. Our millers, who first condemned it, now understand how to grind it, and like it very well.

Nothing will conduce so much to the improvement of our wheat crop, as the free culture of clover.

Osage Orange.—Our farms along the Ohio and Muskingum rivers, are subject to inundation, by which we lose a large amount of fencing. Having suffered in this way, I procured last spring 4,000 plants of this shrub from Mr. Bateham of Columbus,—one-half for myself, and the other half for a thrifty English farmer, who is my nearest neighbor.

The plants were long coming, and consequently somewhat injured, and we lost some 500. Each of us set about a fourth of a mile along the Muskingum. His ground had been previously prepared by throwing up with the spade in winter, and consequently, the plants have grown rather better than mine. My plants are now from a foot to four feet in height.

We have both of us, come to the conclusion, that we might have gained a year by pinching off the tops when they were six inches in height, early in June, as it would cause each branch to send out six or eight lateral twigs, which in turn might be shortened in July, and thus secure a good and compact hedge, of one to two feet in height, the first year, and by adopting a similar course the second produce a hedge. This may not answer everywhere, but upon our soil and in this climate, with good culture, it probably will. We were led to think of it by plants being accidentally broken off.

The only objection which I perceive can be urged against this method, is that it produces smaller branches. True, it dwarfs the plant, but with us, the greatest objection to the orange is, that is is too luxuriant and rank. This seems to make it finer, and better adapted for hedges. We expect to set more in the spring, preparing the ground in winter.

Mustiness.—In a humid climate, along water courses, and upon moist soils, most families are more or less troubled with a musty, offensive dampness. It is frequently so great as to render clothes unpleasant to wear. Drawers and closets are affected by it, and even large rooms, not frequently ventilated, are sometimes so unpleasant as almost to take the breath away on entering. But it is in the pantry, milk-room and cellar, that it is most frequently found. Victuals acquire an unpleasant taste; milk becomes unfit for use, and butter loses its flavor. Now, whatever other causes conspire to produce this result, is it not probable that the presence of an undue amount of carbonic acid gas is the chief cause?

The Remedy.—Would not science dictate something which would absorb the noxious gas? What better than the leaves of plants? There are, doubtless, many who resort to this method; but there may be some, who, like myself, never thought of it. Every few days place a few branches of any good trees or shrubs in the infected apartments. You will probably find the air much improved.

State Fair.—Many of us greatly regret that we have no State Fair this fall. You may expect a large Ohio delegation in New-York, and a kind Providence permitting, next year we will try it in Ohio. Darwin E. Gardner. *August* 20, 1849.

Note.—The mustiness to which our correspondent alludes, can be remedied by placing lumps of fresh burnt lime in the infected apartments. The lime, in the process of slaking, absorbs the carbonic acid gas. Eds.

Ammonia in the Atmosphere.

At the convention of the American Association for the Advancement of Science, held at Cambridge, Mass., in August last, Prof. E. N. Horsford read a valuable paper on the "Moisture, Ammonia, and the Organic Matter of the Atmosphere."

In relation to moisture, Prof. H. gives the following as some of the results to which his observations tended:

1. Other things being equal, the moisture is in general proportion to the temperature.
2. Slight variations of temperature are not accompanied by corresponding variations in the quantity of moisture.
3. Great variations in the quantity of moisture may take place while the temperature and altitude of the mercurial column remain constant. The quantity of moisture has even doubled in the course of an hour, although the temperature became reduced.
4. As a general remark, the moisture on the same day seems to depend chiefly on the direction of the wind.
5. The least quantity of moisture was observed during a N. W. or N. N. W. wind; the largest during a S. W. or S. S. W. wind.
6. The former occurred on the 12th March, and the latter on the 23d of June. The quantity on the latter day was to that on the former as more than fifty to one.

To test the quantity of ammonia in the air, Prof. H. used an apparatus of his own construction. He says—"The object in view in the arrangement of the apparatus was to provide that the air should, by means of an aspirator, be transmitted through a constantly renewed atmosphere of hydrochloric acid vapor. To this end a series of tubes containing asbestos drenched with hydrochloric acid, and terminating in a potash bulb tube containing diluted hydrochloric acid, were connected with a safety tube, which was connected with an aspirator. Through this apparatus, a known volume of air was transmitted. At the conclusion of the experiment, the apparatus was thoroughly rinsed with distilled water, and the ammonia determined in the usual manner with bichloride of platinum.

"To find a normal atmosphere two determinations were made from the end of Foster's wharf, which, in one direction looks out upon the Atlantic during the prevalence of a strong east wind. A second determination was made in a court called the 'Half Moon,' communicating with Broad street, Boston, an area of crescent form, about 180 feet by 70 feet, surrounded by brick buildings of five and six stories in height.

"In these buildings it was estimated there were not less than a thousand individuals, most of whom, in extreme poverty, have within a few months arrived from Ireland. This locality was pointed out by one of the assistants of the City Marshal, in reply to the request that he would direct to the worst habitable part of the city. In the centre of the court were the common vaults and sinks serving this large population. The atmosphere of this court, which was offensive in a high degree, was not found to be distinguished on account of its ammonia, above that of the ocean in an east wind.

"Two determinations were made in Cambridge, one during the prevalence of an east wind, the other during a west wind. The quantities of ammonia in the east wind, as ascertained from the above determinations, vary very considerably from each otner. Great care was taken in the preparation of the reagents employed and the ammonia in the hydrochloric acid, water and bichloride of platinum previously ascertained. Still such was the discrepancy between the author's results, that he forbears a statement of the quantities ascertained, only so far as to remark, that they very greatly exceed those obtained by Fresenius in his recent determinations at Wisbaden.

"Organic matter has been observed in the air by several scientific men. Henry and Chevalier have detected acetic acid, and probably hippuric acid, in the atmosphere of a stable.

"On transmitting a large volume of air through the ammonia apparatus, supplied with hydrochloric acid, and evaporating in platinum over a water bath to dryness and ignition the products of a thorough rinsing, no blackness was observed. On transmitting a similar large volume through a similar apparatus supplied with caustic potassa, previously found to be free from organic matter, and treating as above, the residue blackened. This goes to show, as far as a single result may, that the organic effluvia in the air are of acid character."

Litigation.

I cordially agree with the remarks of a "Farmer" on Litigation in the last *Cultivator;* his admonitions are excellent; and it is well that he has called the attention of the commmunity to the subject.

Persons very peaceably disposed, however, in resisting an oppressor, are liable to be drawn into a lawsuit. Such an instance is fresh in my memory; and we may ask if our judiciary system is calculated in every particular to protect an honest man without the risk of his being ruined? No—it is quite otherwise from its excessive expenses; and though many improvements have been made since we emerged from under a monarchy, yet enough remains of the old fabric to show that the good of a *few*, and the disregard of *the many* have been leading ideas in the minds of most statesmen.

If this remark should seem too censorious, let us consider the provision for jury trials in civil causes, which should never have been introduced. No person more highly appreciates a jury than I do, when life or liberty is at stake,—interposing itself between the government and the accused, for judges in the olden time were more or less suspected of leaning towards the side of power, and the same thing may occur again. But a jury trial in civil causes has no such advantage. A verdict of *Not guilty* is final; but *civil* verdicts are of no certain value. In the former case, a jury is the palladium of liberty, but in the latter, too often the instrument of injustice. In my view it is worse than useless; and this opinion *I know* is held by some of the soundest lawyers in the State. Let us look at the subject deliberately. Twelve men are empannelled to settle a dispute according to the laws of the land; but the judge has first to tell them what the law is, under which they have to act. Now, if they bring in a verdict according to his explanation, what have they done to justify all the expense of bringing them together, and keeping them there? Not one fact have they ascertained that the witnesses would not have established without them; and their verdict, the judge with one-twelfth part of the parade, would have made up and recorded. On the reverse, if they disregard the law, no earthly good is gained,—for the losing party is encouraged to appeal to a higher tribunal, where wrong-headed jurors never intrude.

But this statement is only a part of the story. When a man is sick, does he send for the blacksmith? When he goes to law, does he employ the carpenter? -Yes, as a juror! and the cases are equally inconsistent. Now if the cobbler ought to stick to his last, then lawyers ought to compose the jury in civil causes. But how is it? The farmer is taken from his field, the mechanic from his workshop, and the merchant from his counter—men whose minds have been occupied with far other studies, and whose perceptions have not been sharpened in the school of chicanery. Well, the court opens, and most of its time is taken up by counsel,—on one side in attempts to impose on the credulity of the jury,—and by efforts on the other side to dispel the mists that befog them. Hence comes the minute examinations of witnesses, that have no bearing on the main question—anything to divert attention from a weak point, to puzzle and confound; and hence the four and five-hour speeches, calculated

> —"to make the worse appear
> The better reason"—

but which would not be offered to the judge, were no jury within hearing. He, poor man,—the very exemplar of "Patience on a Monument," must bear it as best he may, for impartiality is a first rate virtue in a judge. Better would it be to dash such sophistry aside, and let the light of truth beam at once on the contending parties.

Against abolishing this cumbrous system, will be opposed the selfishness of some, and on the prejudices of many; but I trust that a fair exhibition of its abuses, before an enlightened people, will gradually work out a remedy.

We want Courts of Conciliation, where those who intend to litigate are *bound to hear advice* before commencing a suit, though *not compelled to take it;* and in this respect we are not far behind the Danish (and perhaps Spanish) colonies in the south. A clear statement of the law as applied to the case, would often operate on a contentious spirit, like oil on the troubled waters; while on the contrary, in the present state of things, an unprincipled lawyer, eager for his fees, often excites such a spirit to a high degree; and inflicts a deep injury not only on the individuals immediately concerned, but also on their neighbors and the public at large. AN OBSERVER.

Grass Lands in Kentucky.

EDS. CULTIVATOR—A young friend of mine asked my advice in laying down to grass a particular field, which he wished to put in rye this fall; I answered his letter. He showed my letter to Mr. Weissenger, one of the editors of the *Louisville Journal*. It is introduced by some remarks from Mr. W. He and myself are at issue as to fall plowing. I adhere to the opinion expressed in my letter to Mr. O. My practical knowledge is not sufficient however, to induce me to maintain it, against the evidence of one more experienced. You will oblige me by giving me light on this subject, either from yourself, or from those in whom reliance may be placed. LEWIS SANDERS. *Grass Hills, Ky., July* 27, 1849.

The following is the letter of Mr. SANDERS, above alluded to:—

MR. R. J. ORMSBY—*Dear Sir:*—In laying down land to grass, either for pasture or for the scythe, it is very important to have it thoroughly and uniformly set, otherwise full benefit is not derived from the land. If the seed comes up in patches, leaving one-fourth to an eighth of the ground bare, which is frequently the case, a corresponding loss ensues. A field rightly managed will graze one-third to one-fourth more *stock*, and yield hay in proportion, than one that is slovenly put in.

Sowing grass seed late in the summer or fall does best, if the succeeding winter is favorable, but the great uncertainty has caused me to abandon fall sowing, as the roots do not attain sufficient strength to resist the frosts of winter.

My observations and experience lead me to disapprove of breaking land in the fall for spring culture. The earth should not be left *naked* at any season, but. when so exposed in the summer, nature *protects herself* by a growth of weeds or some sort of herbage as a clothing. This she cannot do in winter, but is left naked, exposed to the sun, winds, rains and frost, and alternate thawing and freezing for months.

The richest, the most fertilizing particles of the soil are the lightest, consequently the easiest carried off by the rains, melting of snow, and the winds, causing, in my opinion, a much greater loss of the food for plants than is gained by pulverizing the earth from freezing.

My advice is to break up your ground late in the winter, or as early in the spring as the frost will allow. You ought certainly to *trench plow;* that is, a second plow, *following the first in the same furrow*, each to be as deep as the team can draw it. I use *three horses* to plow, geared *abreast*. This is the right preparation for *corn*, or for any spring crop. The ground should then be well harrowed, using a heavy harrow—having your ground in proper order for the reception of small seed, mark it off in checks, that is, each way. Sow half the seed in one way, and cross it for the other half, getting thereby, a more uniform *cast*, leaving no bare spaces.

For meadows, for farm purposes, or for permanent pastures, I sow orchard grass seed and red clover seed only—one and a-half bushels of the former and four pints of the latter to the acre, the seed to be sowed separate, but at the same time harrowed in with a very light harrow, or carefully brushed in. Towards the end of May or early in June, a variety of weeds will make their appearance; the whole of the ground must then be passed over with the scythe, cutting everything as smooth as may be, grass and all.

Keep off every kind of stock till the fall; then it will afford fine grazing for calves.

A compliance with these suggestions will give you the best return for your land, either for meadow or permanent pasture; but if you prefer sowing on winter grain, sow the same sort of seed, increasing the quantity of clover seed fifty per cent. Sow in January or February, but not after the 1st of March, if sowed on winter grain.

Or you may sow on oat ground immediately after the oats are sown. Sow orchard grass and red clover as on winter grain; if the oats should fall or lodge, cut them off close to the ground with the scythe, removing them immediately. Sowing seeds on winter grain or on oat ground will in most seasons succeed so as to afford some grazing, but ought not to be relied on, if you want a full crop of grass for any purpose.

Avoid *red top;* let it not come on your land, unless you have some swampy ground. Upon uplands it is the poorest of all the grasses. It vegetates late, is a great *intruder*, will take hold and spread over the farm, and is of the least value of any.

Have nothing to do with timothy, unless you wish to sell hay as an article of commerce. For this, it is the best, but for hay, to be fed on the farm, it is worthless, and for grazing it has not a tithe of the value of orchard grass.

The remarks of the *Louisville Journal* in relation to Mr. SANDERS' letter, are as follows:—

We are pleased to be able to lay the above letter before our readers. It may be read with instruction by old as well as young farmers. Mr. Sanders' practice of sowing grass alone and early in the spring is undoubtedly the correct one. We think it more bungling to sow with small grain, or to sow at any other season. It is the only method to *insure* a good stand and to insure a good swath the first season. We think, however, that there is a great advantage in breaking up the ground late in autumn or in the early winter. This makes sure of getting the ground prepared for an early sowing, and besides it is the established opinion that the soil is ameliorated by the action of the air and the frosts of winter. This is especially true if trench plowing is adopted; and in this case, there certainly can be little loss from the action of the wind and running water—not so much as if the ground were not plowed at all. The grass seed should be sowed very early, *immediately* after the last harrowing, and just before an expected rain. Two or three harrowings are not too much, and the harrow should always immediately precede the sower, that no wild grass or weeds shall germinate before the sown grass. If sown under the best conditions, orchard grass and clover will take entire possession, and keep it, to the exclusion of all weeds. An excellent method to insure this exclusion, is to soak the grass seeds for twenty-four hours, in which case ashes or lime may be mixed through the seed, after they are drained. This will prevent their sticking together. But soaking is not necessarry if the seed can be sown just before a rain, and just after the harrow. But care must be taken that the seeds be not covered deep, or the weeds will still get the start, and many of the grass seeds will never germinate. Therefore, the surface of the earth should be very smooth when the seed are sown, and the harrow should by no means be used to cover the seed. Brush, as recommended by Mr. Sanders, may be used, but it is much better to draw over the soil a smooth surface of boards like a large door, with the battens uppermost. The horse can be attached to this platform by means of a rope, passing through one corner, and the driver should stand upon the platform. In this way, the soil is smoothed and finely pulverised, and the seeds are but lightly imbedded, and they spring up before the weeds, and prevent the germination of the weeds.

Oxen vs. Horses.

EDWARD STABLER, Esq., of Montgomery county, Maryland, writes to the editor of the *Plow, Loom and Anvil*, that in 1822 or '23 he commenced the substitution of oxen for horses on his farm. He began in midsummer to break up a field for wheat. For a day or two the oxen suffered greatly with the heat, in the middle of the day, but by rising early, and resting two or three hours at noon, and feeding on dry food, he was able to plow nearly as much with a yoke of oxen as with a pair of horses, and the work was quite as well done. The horses consumed about one bushel of grain per day and the oxen none. He found the result, after a thorough trial, so much in favor of oxen, that he has ever since continued their use. For many years there was not a furrow plowed on his farm except by oxen. He observes that oxen, if properly broken, quite as readily, if not more so, take to and keep the furrow, as horses. His rule is to keep two yoke of oxen on the farm to one pair of horses. He well remarks, that—"to judge of the capabilities of the ox, by the badly-used, houseless, over-tasked, and half-fed animals we sometimes see in the yoke, is doing him great injustice. Treat the horse in the same unfeeling manner, and where would be his high mettle and noble spirit? He would speedily arrive at a premature old age, valueless to his owner, and a cast-off to feed the carrion crows. That the ox can better stand this harsh usage, is certainly no valid or sufficient reason that he should be subjected to it. Use him with equal care and humanity, and he will just as certainly, and with more profit, repay it to his owner."

Points of the Horse.

A point of great importance in the fore-leg of a horse, is the proper setting on of the arm, which should be strong, muscular and long. By the length of this part in the hare, added to the obliquity of the shoulder, she can extend her fore-parts farther than any other animal of her size; in fact, she strikes nearly as far as the greyhound that pursues her, by the help of this lever. The proper position of the arm of the horse, however, is the result of an oblique shoulder. When issuing from an upright shoulder, the elbow-joint, the centre of motion here, will be inclined inward; the horse will be what is termed "pinned in his elbows," which causes his legs to fall powerless behind his body. A full and swelling fore-arm is one of the most valuable points in a horse, for whatever purposes he may be required.

If sportsmen were to see the knee of a horse dissected, they would pay more attention to the form and substance of it than they generally do. It is a very complicated joint, but so beautifully constructed that it is seldom subject to internal injury. Its width and breadth, however, are great recommendations, as admitting space for the attachment of muscles, and for the accumulation of ligamentous expansions and bands, greatly conducive to strength. The shank or cannon bone, can scarcely be too short. It should be flat, with the back sinews strong, detached, and well braced. This constitutes what is called a "wiry leg." Round legs are almost sure to fail.

As to the size of a horse, it may be remarked that no very large animal has strength in proportion to its size. That the horse has not, the pony affords proof, if any other were wanting. There have been many instances of horses, little more than fourteen hands high, being equal to the speed of hounds over the strongest counties in England. For example, Mr. Wm. Coke's "pony," as he was called, many years celebrated in Leicestershire.—*Abridged from an Essay on the horse.*

Cultivation of Orchards—Temperance.

EDS. CULTIVATOR—Among the various kinds of business which are followed for a living, those in which the morals of the community are most guarded, are the most important. That men can be honest and moral in every branch of honorable business is true; but that some kinds of business present stronger temptations for over-reaching than others, is also true. I think the business of farming offers fewer inducements for immoral and dishonest acts, than any other followed. That there are farmers who are vicious in their habits and dishonest in their acts, is admitted. Generally, however, good order and sobriety are maintained by the agricultural population of our country.

Since the great temperance reformation came up, the habits of farmers, as well as those of every other class, have improved. It is but a few years since alcoholic drinks were thought necessary to the laborer in the season of haying and harvesting. But a great change has taken place in this respect, and but few farmers persist in the use of such drinks.

Cider-making and cider-drinking have been mostly confined to New-England and New-Jersey. When cider-drinking went out of fashion, the orchards at the west were mostly young, and they were grafted for the production of market fruit. But in New-England, orchards, chiefly of natural fruit, have been growing for a century and a-half. The apples, our fathers thought were just fit for cider and for nothing else; but it has since been proved that they were excellent for stock through the fall and winter.

Twenty and twenty-five years ago, two-thirds of the farmers' time in autumn, was spent in gathering apples and making cider. This caused a great neglect of other crops, and was time thrown away. The farmer filled his cellar with the cider, and carried what was left to the "still," to be made into cider-brandy. It was not an uncommon thing in Connecticut, for the farmer to have, not only a cider-mill, but a distillery also; and even to this day, I am sorry to say, there are some of these mills in operation—preparing poison and death to be scattered through the community.

There are farmers engaged in this business who claim to be moral men; but I would ask them, if by pursuing this business, they are sustaining good order and improving the morals of the community? If not, the business should be abandoned at once. I know the influence of self-interest—there is no interest like it. Of course it is this principle—the desire of making money—that induces farmers to engage in this injurious traffic; and yet I am far from believing that this is a money-making business. The extreme low price at which cider sells, will hardly pay the expense of gathering the apples and making the cider. As to the price of cider-brandy, I know nothing; but I know something of the moral desolation that prevails in neighborhoods where it is extensively sold and drunk.

In the early stages of the temperance reform, some farmers, who had great zeal for the cause, cut down thrifty orchards. This was a great mistake, as was afterwards seen. Of all fruits raised in New-England, the apple is the most useful. The best course which farmers can adopt with their old orchards, that bear only natural fruit, is to cut off the old top, and graft on a new one, with kinds suitable for market. Let all old and unthrifty trees be cut down. The healthy trees, with proper attention, will soon come into bearing.

As to a market for fruit, there will always be a ready one for a century to come. L. Durand. *Derby, Ct., August* 1, 1849.

Transmutation of Wheat into Chess.

Eds. Cultivator—The transmutation of wheat into chess, is doubted by many; and, from your remarks in the July number, I infer that you regard the matter as merely speculative, without any facts to warrant it. To my mind this question is most conclusively settled by evidence which has come under my own observation, and which cannot, in any way, be contested or set aside. With a view of settling this question, I send you the following fact, which you may dispose of as you think fit.

Many years since, while I was yet a boy, I aided my father in the cultivation of his farm. He had a field of about ten acres which he concluded to sow in wheat. The ground was well manured in the fall and the wheat sown at the usual time. It came up remarkably fine and looked exceedingly well, during the fall and throughout the spring. It was pastured, I believe, in the spring by the calves, in order to prevent it from becoming too rank and lodging. The time of heading at length arrived, but judge of the astonishment to find that this promising field of wheat was now one *luxuriant crop of chess*—every stalk of wheat, with but few exceptions, was converted into a head of chess. There it stood; the wonder and amazement of all who examined it.

And now what was to be done with it? was the next question. It was finally concluded to mow it, before it would get ripe, and feed it to the cattle for hay.

This was an operation which I witnessed with my own eyes, so that I had every opportunity to satisfy my mind of the truth of this fact by personal observation. From that time to the present I have never had the least doubt but what wheat may change into chess. Under what circumstances this may take place, or what the cause may be to produce this change, I do not pretend to say. I advance no theory or explanation of this remarkable fact. It is an undoubted truth which cannot be called into question. Nor can you explain it away upon the supposition that the chess might have sprung up from the ground, and finally, supplanted the wheat. This assumption would only be throwing the difficulty further back, and not at all remove it. It would amount to this, *the seed was wheat when sown, but it came up chess*. It had been previously cleared by a fanning process, of every appearance of chess, so that none, or very little was sown with the wheat, and the ground had been a clover field.

You perceive, therefore, that this question is not "without facts to warrant it," but is substantiated by the "most unequivocal and positive evidence;" for I consider that *one fact* is enough to establish the question beyond doubt. A Gleaner of Agricultural Knowledge. *Johnstown, Aug.* 10th, 1849.

We are willing to take the circumstances of the above supposed case of transmutation, just as they are related, protesting, however, against the conclusion. We are willing to admit that the ground spoken of was sowed to wheat which had "none or very little" chess among, it, and that when the crop was cut, there was but very little wheat in it. But after these admissions the question rises—Did the chess come from chess, or did it come from wheat? Which is most reasonable, or most in accordance with known natural laws? All observation teaches that plants reproduce their own species—that they do not produce those of distinct genera or species. Now there is no necessity of violating this law to account for the production of chess in the above case; the thing can be done much easier in various other ways. The seed of the chess may have been partly carried on the ground in the manure, and more or less of it may have remained in the ground from former crops or plants of chess which had grown there. Chess is more hardy than wheat, and when the latter died out, the former spread and occupied its place.

If our correspondent should visit any section of country and find it occupied by *men*, and on repeating his visit, after an interval, should find it occupied by *monkies*, he would hardly attempt to account for the change on the supposition that the men had been "converted" into monkies—even though he could not tell where the latter had come from, and yet this notion would not be more at variance with known physiological laws, than that of wheat changing to chess. Eds.

Crops in New Hampshire.

Eds. Cultivator—In regard to the crops in this vicinity, there is as a general thing, no good cause for complaint. It is true that on light sandy land the severe drouth has caused the grass and grain to be very light, but on our hill land it has been otherwise. There has not been an average yield of hay, probably not more than two-thirds as much as was cut last year; but last year's crop was unusually large. Grain is good, wheat especially so. On account of the drouth, the straw is short, but the heads are well filled and the grain plump. I think there has not been so good a yield for more than ten years, excepting in 1846, which was about the same. The abundant rains that we have had since the 10th of August has been just the thing for corn and potatoes; and they now promise well. As far as we can judge, there will be a fair crop of these two valuable productions. I have not heard of any appearance of the potato disease. There is an uncommon scarcity of fruit. W. L. Eaton. *East Weare, N. H., September* 3, 1849.

Hybridization.

A valuable article appeared sometimes since in the *London Horticultural Magazine*, on the subject of hybridizing plants. Many of the observations of the writer are particularly deserving attention, and we offer some extracts, with a few additional remarks:

"In a practical point of view, the power of producing hybrid plants is one of the most important means which man possesses of modifying the vegetable races, and adapting them to his purposes. To it we owe some, indeed many, of our most beautiful garden flowers, as well as the most valuable of our fruits and vegetables.

"The operation of hybridizing plants, consists in fertilizing the stigma of the flower of one plant with the pollen of another of different though allied characters. The effect of this when the cross fecundation is actually effected, is to originate a new form, usually possessing properties and characters intermediate between the parents.

"It is, however, only between species in which the degree of relationship is somewhat close, that this intercourse is effected; and as a rule, those plants which accord most fully in general structure and constitution, will most readily admit of artificial union. Species that are very dissimilar, appear to have some natural obstacle which prevents mutual fertilization; and *this obstacle becomes insurmountable in the case of very different genera.*

"It has been thought that a law, very similar to that which obtains among animals, also regulates the production and fertility of mule plants; and so far as observations have been made and recorded, this seems, as a general rule, near the truth. Thus two distinct species of the same genus of plants will, in many cases, produce an intermediate offspring, perfect, as far as regards the exercise of the vital functions, but defective as regards the power of perpetuating itself by a seminal process. Even when, in the first generation, this sterility is not apparent, it becomes so in the second, and less commonly in the third or in the fourth generation. Such mules may, however, [sometimes,] be rendered fertile by the application of the pollen of either parent, the characters of which then become assumed by the offspring; in other words, the hybrid form reverts to one of its parents."

The idea above alluded to, that a similar law prevails among plants and animals, in regard to cross-breeding, is supported by many facts. The sterility of hybrid plants is strikingly analogous to the sterility of hybrid animals—as the offspring of the ass and horse; and various hybrids among birds—the produce of the wild (Canadian) and domestic goose, of the Muscovy and common duck, &c. The organization of these hybrids, (as is remarked in regard to plants produced by cross-fertilization,) seems to be perfect, except that they are defective in the power of procreation.

But this tendency to sterility is not confined in animals to the offspring of distinct *species*; it appears not unfrequently in cross-breeds from widely-differing varieties, and more or less in all individuals, which, from whatever cause, show a marked departure from the natural type. Hence the sterility of monsters, and a general weakness of the virile powers in all animals which have any particular organs, disproportionately developed.

Again, the characters of cross-bred animals, like those of cross-bred plants, are often imperfectly developed in the first generation; and there is for a time considerable tendency to "sport," or vary. Experience has demonstrated that this tendency may be chiefly overcome by long continued skill and judgment in selecting and coupling, and a new and well defined sort or breed ultimately obtained. **Knight** accomplished this in the production of various new kinds of cherries, apples, pears, and currants. The same thing has been done in this country with beans, peas, Indian corn, potatoes, turnips, &c. So in regard to animals; **Bakewell** and others have, by crossing, obtained new breeds of horses, cattle, sheep, swine, and poultry; some of which have proved of great value.

The writer above quoted offers various conclusions as to the results of crossing plants; one of which is, that "crossed plants being often less fertile, are in the same proportion more luxuriant, and produce larger flowers." Is there not something analogous to this in the rapid growth and thrift of animals, which are produced by what is called a "strong cross?"

Race's Self-Registering Stove.

We notice, in various parts of the country, that great and constant inconvenience is experienced by the unequal temperature of rooms heated by stoves. This inconvenience is still greater where sheet-iron stoves are used, which otherwise possess the advantage of saving fuel, and warming up quickly a cold room in the morning.

7 —RACE'S STOVE.

We have found, from some years of trial, Race's Self-Registering Stove, to possess all the advantages of heating a room from zero to summer heat in five minutes after a fire is kindled, and then maintaining this temperature with scarcely a degree of variation, throughout the day. With rather coarse wood, it needs no replenishing for hours together; and will keep a room warm all night without attention, except throwing in at bed-time two or three large sticks of wood. The register needs registering only to adopt the heat to the nature of the weather, which may perhaps be necessary once or twice a day, and is done in one second. As for economy, we obtain the same heat with about half the fuel formerly needed for a good hot-air furnace with eight drums and air-pipes a foot in diameter. One stove heats three rooms night and day, seven months, with about six cords good wood.

To prevent the rapid accumulation of soot, the pipe should be as nearly vertical, or with as few elbows as possible; and to avoid the dropping of pyroligneous acid, each joint of pipe should enclose, instead of fitting in, each piece above it. Puffs of smoke are prevented by putting in a moderate quantity of wood at once, so as to allow a very slight draught of air.

Ashes and Lime---Experiments.

Wm. H. Ross, of Sussex Co., Del., who has used over 40,000 bushels of ashes within the last five years, gives some of the result of his experiments, in the *American Farmer*. In one instance, ashes were applied to an exhausted field, cleared more than sixty years, and never manured. Squares of a half acre each were marked off for each experiment, the quality being alike. The following were the results, the ground being planted with corn.

25 bu. of ashes	per half acre,	gave	20 bu. ears.
50 bu.	"	"	20 bu. "
25 bu. of lime	"	"	15 bu. "
50 bu.	"	"	15¼ bu. "

Two squares, unmanured with either, each, 10 bush.

The second year, about the same rate of difference continued. In this experiment, 50 bushels per acre were found about equal to 100 bushels. But in all other experiments, 100 bushels of ashes were found better than 50, and 200 better than 100, although so large a quantity was not found profitable. But with lime, little difference could be perceived between 50 and 100 bushels per acre. In some instances, lime produced no good result. Ashes, on the contrary, invariably produced a decided benefit, whether on poor or rich land.

His farm, containing 400 acres of arable land, has doubled its products in five years, chiefly by the use of lime and ashes. But other manuring was found necessary.

The following experiment gave interesting results. A field of very poor land was manured, a part with mould from the woods 100 *loads* per acre; a part with ashes 100 *bushels* per acre; and a third portion with both. Where the ashes and mould were combined, the corn was more than twice as good as where the ashes were spread alone; the ashes alone gave corn 50 per cent. better than the undressed parts of the field; while the mould alone produced scarcely any sensible effect. A dressing of 100 loads of mould from the woods, 50 bushels of lime, and 100 of ashes, generally increased the corn crop more than 20 bushels per acre, and wheat in the same ratio; and so permanent are the effects of this mixture, that he believes its effects will be seen for 20 years.

The soil on which these experiments were made was chiefly sandy loam, with some clayey portions; on the latter, lime was found most beneficial. Similar experiments would doubtless give different results in other places, where the constituents of the soil vary in character and quantity.

Increase of Exports.—For the last four months of 1848, the exports of flour were about *seven times* as great as in the same corresponding period in 1847; of wheat, *seven times* as great; of corn more than eight times as great, and of meal, a little less.

Fattening Cattle in Virginia.

In *The Cultivator* for May last, we gave an extract from a letter received from Mr. Noland, of Virginia, in regard to fattening cattle. It appears that the "Agricultural Club of Albemarle" appointed a committee to make inquiries in regard to the business, and of their report we give the following abstract from the *Southern Planter:*

William Garth fattened 166 head, commencing 20th October, 1848.

Expenses.

150 bought at $27,	$4050 00
11 raised 4 years,	275 00
5 " 3 years,	100 00
Total cost,	$4425 00
Feeding of 91 at Birdwood Farm—	
2442 bushels of corn, at 40 cents,	976 80
300 " oats, at 25 cents,	75 00
965 " bran and shorts,	96 50
	$1148 30
Feeding of 75 at Midway Farm,	924 62
Cost ready for market,	$6497 92
Interest on outlay, expense of driving, charges in Washington, Baltimore and New-York, commissions, &c.,	1362 64
Total debits,	$7860 56
Total amount of sales in New-York,	8330 76
Profit in cash,	$470 20

Besides 1500 heavy loads of manure. Two hundred fattening hogs gleaned after the beeves, and half of their usual food was saved. The manure was applied to land that would not bring four barrels of corn to the acre. It was sufficient to have covered one hundred acres of the average land of the farm. Mr. Garth's statement was drawn up with great minuteness. Of course, we give but the outline.

R. W. Noland fattened 20 bullocks.

Cost, at $29.60 each,	$592 00
104 barrels of corn, at $2,	208 00
100 bushels of oats, at 25 cents,	25 00
200 " bran, at 10 cents,	20 00
Interest on outlay,	14 00
Total expenses,	$859 00
20 beeves sold at home for	998 14
Leaving profit, besides manure,	$139 14

W. W. Minor fattened 43 bullocks.

36 cost $26.53 each,	$954 08
3 cost $12.92 each,	64 60
2 old steers, estimated at	50 00
Interest on outlay,	32 00
Fed 22 bushels corn per head, and 20,000 lbs. of hay,	465 32
Total expenses,	$1566 00
Sales,	1586 93
Profit in cash, only,	$20 00
Besides 200 loads manure, worth	$200 00

Manuring by Pasturing Sheep.—Sheep usually select the dryest spot for the night, which thus receives an undue proportion of their manure. This is remedied in England by hurdles, but a simple and easy mode, stated by the Michigan Farmer, is to go into the field just at bed-time, and frighten the sheep from their accustomed resting place with an umbrella; they immediately drop in their tracks and remain till morning.

Sales at the State Fair.

Sales in stock, implements, &c., were made to a very large extent at the late State Fair. It is probable that property of various kinds to the amount of fifty thousand dollars changed hands on the show-grounds. This indicates that this feature of our exhibitions will have an important influence in sustaining them. It is the best opportunity for buying and selling which can be afforded, especially on account of the means of comparison which are here available.

We have received authentic accounts of but few of the sales. We are told there was a large trade in horses, and have heard of several pair of matched horses being sold at good prices—from $600 to $1000 each pair. The Morgan stallion General Gifford, was sold by G. A. Mason to C. W. & M. H. Ingersol, of Lodi, Seneca county, for $1000. Mr. Mason afterwards bought the Major Gifford, of Mr. Blodgett, of Chelsea, Vt. A fine three-year-old filly of the same stock was sold by Mr. Wier for $200.

A superior two-year-old colt, by Black Hawk, was sold by H. H. Hall, of Bridport, Vt., to David Deuel, of Shelby, Orleans county, N. Y. This animal attracted much attention. His dam was said to have been a cross of the English blood horse, and the colt in question showed the points of that stock beautifully blended with those of the Morgan, derived from his famous sire.

The sales of cattle in the different classes were extensive. Mr. Bell's short-horn bull, which took the second premium, was sold to Mr. Thorpe, of Albany, for $400. He is a fine animal. Col. Sherwood sold several bull calves at $100 each; Mr. Morris, of Morrisania, and Mr. Allen, of Black Rock, several cows and heifers.

In Herefords, Messrs. Sotham and Bingham sold several bulls and cows from $100 to $125 each.

In Devons there was a brisk trade. The splendid Devon bull exhibited by Mr. Gapper of Canada, was sold to Mr. R. H. Van Rensselaer, of Butternuts, Otsego county. We are glad that this fine animal has been retained within the state. Mr. Gapper's bull calf was sold to Hon. Mr. Mowry, of Rensselaer county, who also purchased a fine heifer of Mr. Stevens. Mr. Beck, Mr. Washbon, and others, sold calves and young stock at from $40 to $80 each.

We were informed that large sales in sheep were made by Messrs. Bingham, Blakeslee, and other breeders of Merinos, and that liberal sales of Leicesters were made by Mr. Miller, of Canada, as well South Downs by Mr. Wakeman, and others.

The dealers in implements also sold largely. The sales of Mr. Emery amounted to $1500 on the grounds, besides contracts to about $1000 more; and we learn that a good business in this line was driven by most of the exhibitors. The purchasers were from many parts of the country; many from the western states—Ohio Michigan, Wisconsin, Illinois, &c.

Albany & Rensselaer Horticultural Society.

The Annual Exhibition of this Society was held at Albany on the 19th and 20th of September. The show of fruits and flowers was decidedly the best ever made by the Society, and was, indeed, highly creditable to our cultivators, and encouraging to all interested in horticulture and floriculture. In fruits, we noticed the splendid collection of H. Vail, Esq., of Troy, embracing 37 varieties of pears, 28 of apples, 24 of peaches, 4 of native grapes, 4 of foreign do.,—all very choice and beautiful specimens. S. E. Warren, Esq., of Troy exhibited a very handsome collection of various kinds of fruit, among which were 15 varieties of plums, 11 of peaches, several kinds of nectarines, samples of figs, &c. The President of the Society, Joel Rathbone, Esq., exhibited fine specimens of grapes and other fruits. The display of peaches and plums was uncommonly fine. Among the former we noticed, besides those above mentioned, those offered by Mr. Kirtland and Mr. Aiken, of Greenbush, Mr. Prentice, Mr. J. S. Goold, Mr. E. Corning. Jr., and Mr. Thorpe, of Albany. The exhibition of plums was large and fine. The display from the noted garden of Mr. Denniston numbered 32 varieties, nearly half of which were seedlings originated by himself. Several of these are still unnamed, though from their peculiar and valuable qualities, well worthy of cultivation. Mr. McIntosh showed a large collection of fruits, embracing pears, grapes and plums. Among the latter was an excellent late variety, which we shall speak of again. Mr. Douw had a fine collection. among which were 15 choice varieties of plums. Dr. Wendell showed many kinds of pears, apples, &c. Many handsome specimens of plums, grapes, &c. were shown by Mr. Prentice, Mr. Platt, Dr. March and Mr. Cary. Dr. M. had specimens of the White Magnum bonum which weighed four ounces each.

Fine melons of various kinds were shown by Mr. Rathbone, Mr. Prentice, Mr. John Wilson, Mr. Goold, Mr. Kirtland, and Dr. Wendell.

There was a fine show of vegetables, which we have not room to notice in detail. The principal exhibitors were Mr. J. S. Goold, Mr. Prentice, Mr. John Wilson and Dr. Wendell.

The display of flowers was very brilliant—far better than was expected considering the severity of the drouth which continued into August. Beautiful floral candelabras were shown by Mr. Rathbone, a handsome and tasteful floral temple by Dr. Wendell, a rustic moss-covered cottage, by Mr. D. T. Vail, Troy, and very handsome bouquets of various forms, by Mr. James Wilson, Mr. Vail, Mr. Rathbone and Mr. Newcomb. Splendid collections of dahlias and other flowers were shown by Mr. D. T. Vail, Mr. Jas. Wilson, Mr. Newcomb, Mr. Dingwall, and others. A variety of dahlia called Beauty of Sussex, an elegant specimen of which was shown by Mr. D. T. Vail, attracted great attention.

Death of Rev. Henry Colman.

Most of the papers have already announced the death of our esteemed countryman, Rev. H. COLLAN. He died on the 17th of August last, at Islington, near London. He went out to England in May last, for the purpose of obtaining materials for the completion of a work on the institutions and social condition of Europe. Just as he was about to return, he was seized with a fever, and survived but a short time. He was widely known, both in this country and abroad, for the interest and zeal he had for many years manifested in the cause of Agriculture. We cannot at this time, particularise in reference to his writings on this subject, which have been voluminous and extensively read. As a man, he was esteemed wherever he was known for his benevolent spirit, and bland and easy manners. Various tributes to his memory have appeared from the American press, and the following extract from the London *Mark-Lane Express* will show the favorable light in which he was regarded in England:

"It is with extreme regret that we announce the death of Mr. Henry Colman, of Salem, Massachusetts, U. S. Mr. Colman had been resident several years in this country and upon the continent of Europe, whither he had gone for the purpose of acquiring a knowledge of European agriculture, and which he diffused through the United States by means of a work published in parts, and which he completed a short time since. Mr. Colman was personally known to, and had been entertained at the houses of many of our leading landed proprietors and tenant farmers. His moderate opinions and unassuming manners rendered him a general favorite with ourselves and many who will deplore his loss."

Death of Thomas Bates, Esq.

Eds. Cultivator—Allow me herewith to furnish you for publication, an extract of a letter I received from England, by the arrival of a recent steamer, addressed to me by Robert Bell, Esq., dated Kirkleavington, 22d August. He remarks—"It is my most painful duty to announce to you, that our late much esteemed friend, Thomas Bates, Esq., is no more. His spirit returned to God who gave it, on the 26th July last, after an illness of six weeks. It may be said of him his country has met with a great loss; more particularly its agricultural community, as he was a practical agriculturist of a discriminating mind, and great experience. He more particularly excelled in the science of breeding,—especially in the breeding of Short-horn cattle. He, early in life, evinced a lively interest in this department, and by nature, he seemed highly qualified, not only to become conspicuous, but successful, in this branch of his profession, and the result of his 60 or 70 years of practical application, placed him in the front ranks of the most successful breeders England has ever produced. The wide spread reputation and standing of his Duchess herd of Short-horns, is well known and appreciated. The public will now have a full opportunity to judge of their merits, as they will be offered for sale at auction, probably next spring, or summer. The time of sale is not fixed, but as soon as it is, I will take the earliest opportunity of informing you. I intend offering part of my herd, and that of my brother's, at the same time; probably the number offered will amount to 150 head."

Having myself, sold many cattle to gentlemen in the United States and in Canada, possessing the blood of Mr. Bates' herd, I presume the intelligence contained in the extract of Mr. Bell's letter will be of much interest to them. Hence, allow me to ask the favor of its insertion in *The Cultivator*. Geo. Vail. *Troy, September* 15, 1849.

Answers to Correspondents.

Apples cultivated by the late Mr. Phinney.—Eds. Cultivator—You may inform your correspondent, "S. W.," in answer his inquiries about Mr. Phinney's Orchard, that the most valuable varieties of sweet apples that have yet come to bearing, are the following: Bough, (early ripening;) Plum water, (fall ripening;) Danvers, or Essex Green-Sweet, (winter ripening;) Andover Sweeting, (winter ripening.) Several other generally approved varieties of sweet apples have not yet come to bearing and therefore not determined. Nothing is placed around the trees to prevent injuries in plowing and harrowing the land. The work is done with oxen, and the strictest care enjoined upon the workmen. No injury has ever been done to the trees in cultivating the ground. F. Holbrook.

Poultry in Yards.—"A Subscriber," New-York. It is true, as has been often stated, that when large numbers of fowls are kept together in close confinement, they are often affected by diseases. Care should be taken that the yard and houses are exposed to a free circulation of air, and that they are kept as clean as possible. The different apartments should be whitewashed once or twice a year, and the manure should not be allowed to accumulate, as the gases which arise from it during fermentation are detrimental to the health of the fowls.

Eradication of Garlick—Eds. Cultivator—I observed an inquiry in the June number of *The Cultivator* for the best method of destroying the wild onion or Garlick. As this has not been answered by any of your correspondents, I will briefly state what I have done and the result.

I have adopted a rotation of summer cropping; say, one year corn, next potatoes, next oats, with clover seed, seeding pretty heavily, and plastering the clover. Let it lie one year—then repeat the same course. I had a field very full of the wild onion, which I treated as above mentioned, and at the end of my second course the plant had entirely disappeared, and I have seen none since, although this was done more than 20 years ago. Nathaniel Beckwith.

Domestic Economy, Recipes, &c.

Sewing Machine.—The editor of the Michigan Farmer witnessed the operation of a sewing machine, only a foot in length and breadth, but traversing a frame-work of several feet. A small crank moves it, which a child may turn. It contains a combination of "the wheel, lever, and spiral spring;" the eye of the needle is near its point; the thread is coiled with a cylindrical case; and the needle being once threaded, supplies itself till the skein is exhausted. A pair of pantaloons can be made by it (without buttons and button holes) in thirty minutes, and an overcoat in an hour and a half.

Patent Bread-Making Machine.—A machine for making bread is said to have been invented in Glasgow, Scotland, of which we find the following account in a foreign paper: It has for its object the accomplishment of the following among several other points of importance in the manufacture of bread or biscuits. 1. By the substitution of carbonated water for yeast, to render bread more nutritive. 2. A saving of 50 per cent. in the cost of fuel in heating the oven, by means of an improved method of substituting steam for fire. 3. The gradual admixture of the flour with the water without manual labor. 4. To insure the oven being kept of an equal heat by means of an indicator and regulator, and by means of which the heat can be kept exactly as may be desired. 5. An invention for placing the bread in and removing it from the oven. 6. By the use of an ingenious contrivance to regulate the desired weight of all bread, whether from an ounce to any number of pounds the baker may desire, without the possibility of error. 7. The saving of all manual labor in the manufacture of bread, with the exception of that of a few boys to place it upon, and receive it from the machine. 8. The avoiding of the necessity of the human hand touching or kneading the dough.

To Cook Cucumbers.—The Michigan Farmer recommends the following mode of converting cucumbers into "a delicate and delicious article of diet:"—Take cucumbers pretty well grown, and cut them into slices half an inch thick; put them into a vessel with a "fair proportion" (?) of sliced onions, with a lump [how large?] of butter, and stew them three quarters of an hour, adding salt and pepper, but using at no time any water.

Bed-rooms.—A correspondent of the Prairie Farmer, urging the importance of spacious bed-rooms, very justly recommends the rejection of such a room as a parlor, where plenty of room for both cannot be afforded. "The parlor is the best room in the house, and used only once in a week or two, while the bed-room is in use at least one-third of every twenty-four hours. A bed-room, for health and convenience, should be large, with a high story, and 16 by 16, or 16 by 18 feet, with no furniture but dressing table, toilet, wash-stand; with it should be connected a wardrobe, and bathing tub and shower-bath. These are daily comforts, and not kept for the use of others, as a parlor."

Notes for the Month.

Communications have been received since our last, from Wm. Jennison, Jas. R. Hammond, Darwin E. Gardner, S. Worden, W. L. Eaton, A Subscriber, Josiah W. Ware, M. W. Phillips, R. Watkins, Nathan Beckwith, John A. Porter, S. M. Norton, H. Watkins, W. R. S.

H. K. C., Cherokee Nation.—We cannot furnish "The Cultivator," for 1848, singly, the numbers for that year, together with the engravings, plates, &c. having been all lost by the fire which destroyed our office. We have succeeded in purchasing some vols. for that year, to complete sets of our work, so that we can furnish orders for *all* the back vols. All the vols., except the one for 1848, can be had singly.

The American Fruit Culturist, containing directions for the Propagation and Culture of Fruit Trees in the Nursery, Orchard and Garden, with descriptions of the principal American and Foreign varieties, cultivated in the United States. By John J. Thomas. Illustrated with three hundred accurate figures. Auburn: Derby, Miller & Co.

We have received a copy of this work from the publishers, Derby, Miller & Co., Auburn, who have got it out in good style. It makes a handsome duodecimo of over 400 pages, and is sold at $1.00. The readers of "The Cultivator," who are familiar with the writings of Mr. Thomas, on the subject of horticulture generally, will need no commendation from us, to induce them to procure it. We may, however, say that few men in our country have given more attention to the subject of Fruit in all its aspects, than Mr. Thomas. In the volume before us, we have the results of his experience and observation, continued with untiring perseverance for many years, in language at once concise and perspicuous; and we cannot doubt but that it will be deemed a valuable acquisition to the literature of this branch of rural improvement.

The Christiana Melon.—We are indebted to Henry Vail, Esq., Mount Ida Farm, Troy, for some specimens of a very fine melon of this name. It is of about a medium size, as compared with the nutmeg and citron varieties, rather egg-shaped; skin thin, of a pale-green color; flesh thick, of a deep orange yellow, sweet, melting, and high flavored. It is decidedly the best yellow-fleshed melon we have ever seen, and scarcely inferior to the best of any kind. It is early, coming to perfection, as Mr. Vail informs us, two weeks before any other good variety.

Scientific School.—We have received a prospectus of an institution entitled "Scientific School of Useful Knowledge," located at Darien Centre, Genesee county, N. Y. The Institution embraces a male and female department, each distinct and separate from the other. The department for boys has three divisions, called the Classical, Commercial and Agricultural. In the first, young men are fitted for college; in the second they are taught the principles of trade, book keeping, &c.; in the third, agricultural chemistry, natural history, &c. The course of studies for females is appropriate and designed to embrace the term of three years. The Institution is under the charge of Rev. D. M. Smith, whose testimonials for so important a trust are numerous, and from high sources.

The Homer Car.—We have mentioned in another place that there were twenty yoke of working oxen exhibited at the State Fair, from Homer, Cortland county. These oxen came on in one team, attached to a large car, of octagonal form, ornamented with wreaths of evergreens and flowers, and containing handsome specimens of fruits, vegetables, grains, &c., the produce of the town from which it came. It was surmounted by a flag, and made an imposing appearance as the noble team drew it to the field.

Corn for Seed.—Corn for seed ought to be gathered in September. It should be *selected* in the field, as a much better opportunity is here afforded for obtaining the best, than if it is taken from the heap after it is husked. In the field we can see all parts of the plant, and can judge whether it possesses the characters we desire to propagate. The most perfect ears should be chosen. They should be sufficiently early, and should be taken from stalks of moderate size—the ears rather low on the stalk. The ears designed for seed can be secured as soon as the grain is fairly glazed, by cutting the whole stalk, near the ground, and hanging it in some airy room or shed. The grain will be supported by the sap of the stalk and will fill as well as if it had remained in the field.

Reaping Machines.—The Prairie Farmer says—"McCormick's Reaper has been now sold in the west for three seasons extensively, and somewhat before that. The sales amount, say, to the following figures: For the year 1847, to 500; the year 1848, to 800; and 1849, to 1500; total, 2800. Of Easterly's Harvester, the whole number in use this harvest may reach 180. Other kinds, say 100. These all do the work of nearly 17,000 men."

Hilling Potatoes—the Rot.—Our potatoes are very free from the rot. It has been thought that the exemption is owing to the manner of hilling them,—so that the rain is turned off as much as possible, and the tubers not allowed to soak in wet weather. We formerly made the hills like a basin to catch the rain; but now they are made in the shape of a cone. There may be something in it; for the ground was well manured, which I believe has generally proved unfavorable. [Extract from a correspondent.]

Long-Wooled Sheep.—N. S. Townshend, in a communication to the *Ohio Cultivator*, states that the Leicester sheep do *not* consume a proportionate amount of food in proportion to their bulk—that being hardier and healthier, their flocks may be increased much faster—that besides the excellent quality of the mutton, he has weighed single animals of 300 pounds—and that a whole flock will average 6 lbs. of wool a piece, the rams often shearing 10 or 12 lbs., and that the wool sold this year at Elyria for 23 cents per pound.

Peat Charcoal.—The value of peat charcoal is attracting much attention in England, not only as a manure or fertilizer of itself, but also as a deodoriser or disinfectant. Mr. J. W. Rogers, of Dublin, has for some time been engaged with experiments of this substance. When he first brought the matter before the public, in 1845, it was alleged that charcoal could not impart carbon to the roots of plants, as the leaf was supposed to be the only medium by which plants could absorb such food. He states that he has often tried the experiment, and that the result has invariably been that both the root and leaf took the carbon. He concludes, from his experiments, that peat charcoal possesses some valuable properties which wood charcoal does not, particularly as a deodoriser. Its absorbent power is very great. Mr. Rogers states that it will take up and retain from 80 to 90 per cent. of water, and from 90 to 100 volumes of noxious gases arising from animal excrement and other putrescent matter.

Osage Orange.—The editor of the *Valley Farmer* thinks that this plant has not been sufficiently tried to justify the judicious farmer in the extensive cultivation of it. He thinks those farmers who are unwilling to prune their fruit trees, will be likely to neglect their hedges; and that the Osage orange, without pruning every year, will become overgrown and occupy too much space; will die out in places and leave gaps. This may be true; but where materials for fencing are scarce, we think farmers, who understand the management of hedges, and will give them proper attention, will do well to make a trial—at first on a small scale—with the Osage orange.

Fine Fruits.—We have received of J. W. Ford, Esq., of this city, by the politeness of Hon. Mr. Bush, fine specimens of the Brown Beurre, and White Doyenne or Virgalieu pears. Also, from Mr. McIntosh, of this city, Brown Beurre and Gansell's Bergamot pears of large size and fine quality. The latter gentleman, and Mr. Joseph Cary, of this city, have favored us with excellent specimens of the Royal Muscadine, White Sweet Water, Black Cluster, and Isabella grapes, well ripened in the open air.

☞ We tender our thanks to Mr. E. E. Platt, for a liberal donation of fine plums from his garden on Arbor Hill.

Causes of Decay in Timber.—In *The Gardeners' Chronicle* of June 30th, 1849, is an able and valuable article, under the editorial head on this subject. It was probably written by Professor Lindley, the well-known editor of that journal. In the *American Agriculturist* for September last, we find the principal part of the same article, inserted as original, under the signature of "B."

"Escutcheons" of Cows.—J. N. Pierce asks the editor of the *Ohio Cultivator* what he thinks of Guenon's Treatise on Milch Cows; and adds, that the observations he has made since reading the work, do not agree with the rules there laid down.

Subsoil Plowing.—Ex-Governor Hill states in the *Visitor*, that he has found great benefit from subsoil plowing on the "driest plains" near Concord, N. H. He states that in a field of potatoes on these plains, the past season, he found the length of the potatoe-vines a "sure index of the depth of the plowing." Wherever the ground was cheated of the subsoil plow, upon a balk, or in the field, the vines were as much shorter, as the soil was stirred a less depth." He gives the result of an experiment in subsoiling made several years since. The ground was plowed with a surface plow, eight inches deep, and a subsoil plow run in each furrow eight inches deep. He left two strips, a rod wide, not subsoiled. He had taken six crops from the field—three of grass, one of oats, one of corn—and the inferiority of each crop on the portions not subsoiled was apparent, and could be seen at the distance of forty to fifty rods. The subsoiled part gave from two to three tons of hay to the acre.

Sowing Grass Seed in Autumn.—The American Farmer recommends for the late sowing of timothy seed, that a peck of *buckwheat* per acre be sown at the same time. The frost will cut the buckwheat down, where it will remain to protect the young plants through winter.

Salt for Asparagus.—The editor of the New England Farmer says that asparagus will bear one hundred and sixty bushels of salt per acre, and be greatly benefitted by the application—and that cabbages and turneps are much benefited by salt.

Farm School.

THE *Mount Airy Agricultural Institute* will commence its winter session on the first Thursday of October next.

The course of instruction pursued is such as to insure to the student a thorough knowledge of the *Natural Sciences*; collateral with a full practical course on the farm, in all the labor of which the students participate.

For further particulars address the Principal.

JOHN WILKINSON,
Germantown, Pa.
Sept. 1, 1849.—2t.

Prices of Agricultural Products.

New-York, Sept. 20, 1849.

FLOUR—Genesee, per bbl., $5.25a$5.37½—Common State and old mixed Western, $4.75a$4 87½

GRAIN—Wheat, Genesee, per bush., $1.17—Southern Red, $1.03a$1.08—Corn, Northern and Jersey, 59½a61.—Rye, 58c.—Barley, 67c.—Oats, new, 36a38c., old, 39a40.

BUTTER—best, per lb., wholesale, 18a20c.—western dairy, 14a16c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $12.50a$12.75.

PORK—Mess, per bbl., $10a$10.12—Prime, $8.50a$8.62½.

LARD—per lb., in kegs, 6½a6¾c.

HAMS—Smoked, per lb., 8a11½c.

HOPS—per lb., first sort, new, 15c.

COTTON—Upland and Florida, per lb., 9a11½c.—*New Orleans* and Alabama, 9a11½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb., ... 40a42c.
American full blood Merino, ... 35a37c.
" half blood do.,... .... 30a32c.
" one-fourth blood and common,..... 27a29c.

Remarks.—Breadstuffs are in fair demand for the local trade and for the east. In provisions the trade is without much change. The latest arrivals from England, represent the harvest as excellent, and the weather very favorable for securing it.

South Down Sheep

FOR SALE. Ten full blooded South Down Rams, from Lambs to four years old. Also 20 Ewes, from yearlings to four years old.

The subscriber has spared no expense and care to raise the flock to a high standard, and he, therefore, offers them for sale with confidence in their merits.

Application may be made, either personally or by letter, addressed.

JOHN McD. McINTYRE.
Albany, N. Y.
Oct. 1—2t.

Highland Nurseries, Newburgh, N. Y.

Late A. J. Downing & Co.

THE Proprietors beg leave to inform their patrons, and the public in general, that their stock of

Fruit & Ornamental Trees, Shrubs, Roses, &c.,

For autumn planting, is unusually large and thrifty, and embraces all of the best varieties introduced into notice in this country or Europe, of Apple, Pear, Plum, Cherry, Peach, Nectarine, Apricot, Grape Vines, Gooseberry, Currants, Raspberry, Strawberry, &c.

Portugal Quince trees, standards, extra size, each, $1 00
" " quenouille, " " 1.00
Angers, (*true*) extra, " 1.00
Trees of the usual size, 50 cents.

The stock of Ornamental Trees, Shrubs, &c. is very large, and quantities to dealers, or planters on a large scale, will be furnished at greatly reduced rates.

Hedge Plants.

A large lot of Buckthorn and Osage Orange plants.

Also, a large lot of Rhubarb and Asparagus roots.

The entire stock has been propagated under the personal supervision of A. SAUL, whose long connection with this establishment is some guarantee, from the reputation it has gained, and the *present proprietors are determined to merit*, as to the genuineness and accuracy of the present stock.

Orders respectfully solicited, and will receive prompt attention, which will be carefully packed and shipped to any part of the Union, or Europe.

Catalogues furnished *gratis* to *post paid* applicants.

Newburgh, Oct. 1—2t. A SAUL & CO.

Prince's Linnæan Botanic Garden & Nurseries,

Flushing, N. Y.

WM R. PRINCE & CO., successors of Wm. Prince, and sole proprietors of his great collection, offer the largest and choicest assortment of

Fruit and Ornamental Trees and Plants,

To be found in America; and will transmit *Descriptive Catalogues* to all post paid applicants, desirous to purchase.

The choicest varieties of fruit which are scarce elsewhere, are here extensively cultivated and applicants will not be disappointed. Every desirable fruit enumerated by Downing, Manning, Kenrick and Hovey, and in the catalogues of Europe, can be supplied. Of the finest varieties of Pears, 50,000 trees can be supplied, of which 15,000 are of bearing age on both the pear and the Quince. Purchasers are solicited to visit the establishment, and judge for themselves; but the same attention will be paid to the selection for all distant correspondents. The prices are as low, and mostly lower than trees of equal quality can be elsewhere obtained. And above 500 varieties of Fruit Trees, and a much larger number of Ornamental Trees can be supplied, that cannot be obtained elsewhere in the Union, except in a few casual instances.

Every premium for Roses and Strawberries, was awarded to us by the Long Island Horticultural Society.

A Wholesale Catalogue will be sent to all venders.

The transportation expense to the West is now moderate, and the Agents' Receipt will be sent to each purchaser, which will prevent the possibility of loss. Cash or a reference can be sent with the order, by those who are strangers to us.

Oct. 1—1t.

Private Boarding School,

Reading Ridge, Fairfield County, Ct.

THE next session of this Institution opens on the first Wednesday in November next. Course of instruction embraces all the English branches, together with Latin, Greek, French and Music. There is an excellent farm connected with the school, and students will be instructed in Agriculture if desired.

The terms are $80 per session of five months, including board, tuition, washing, &c., &c.

Circulars may be had of Charles Ames, 104 Broodway, New-York, or by addressing the principals.

DANIEL SANFORD, Jr., } Principals.
Oct. 1—1t. A. M. SANFORD, }

Employment Wanted.

ANY one who wishes to pay a good price for an active and industrious hand to manage a farm, one who has studied the principles and practice of modern farming, who can construct and repair buildings and implements, who is 27 years old and has a small family, address, *post paid*, CHARLES BETTS,
Burr-Oak, St. Joseph Co., Mich.
Good references given and required. Oct. 1.—1t.*

Macedon Nursery.

THOMAS WRIGHT, successor to Wm. R. Smith, (whose ill health compels him to relinquish the business,) has purchased the entire stock of this well known establishment, for which he has hitherto acted as agent. The design of the original proprietor, "to furnish the community with the best varieties of Fruits," will be constantly kept in view.

The stock of Trees is now large, and will be sold at the Nursery at the following reduced prices, viz:—

6,000 Apples, $16 per hundred, $18 when delivered.
1,000 Pears, $35 per hundred.
3,000 Cherries, $25 per hundred
3,000 Peaches, rare kinds, $10 to $12 per hundred.

Apple, Pear, Wild Plum, Quince, &c., by the thousand.

Apricots, Nectarines, Plums, Filberts, Quinces, Chestnuts, Walnuts, Strawberries, Grapes, &c., &c., at very moderate rates. A great variety of Ornamental Trees, and Roses, and other Plants are offered at 50 per cent discount from the usual prices. Immediate attention will be given to all orders accompanied by cash or satisfactory reference.

Macedon, Wayne Co., Oct. 1—1t.

Patent Railroad Horse Powers and Overshot Threshing Machines and Separators.

NOTWITHTSTANDING the increased facilities for manufacturing the above celebrated machines, which our extensive manufactory recently erected in this city affords, the demand has exceeded the supply.—Upwards of three hundred sets have been sold since the first of June, and to almost all portions of the Western states, as well as our own.

In all and every case, they have given universal satisfaction—and with their long established character for durability and cheapness of cost and efficiency, their utility is no longer questioned. More than one hundred sets have been sold this season in the states of Illinois, Wisconsin and Ohio—several in Indiana and Canada, and but one opinion prevails where they are used. With our liberal terms, as advertised by catalogues and other ways, the purchaser ventures nothing in trying or purchasing them.

Below we give the opinion of Mr. J. A. Wight, editor of the Prairie Farmer, at Chicago, Illinois, than whom a more capable, careful, or independent man in such matters, is not to be found. He was authorised by me to receive orders for the above machines and has succeeded thus far, in forwarding more orders than could be supplied.

The same Mr. Wight was appointed chairman of the committee No. 1 on Agricultural Implements, at the Fair of the State Ag. Society at Syracuse, but was detained at home, and forwarded the following opinion in writing, for the use of the committee.

"I have sold about thirty sets of the Railroad Horse Powers and Threshing Machines this season, and a majority of them have gone into use.

"Thus far they are greatly preferred for the following reasons:

"Ease of operation, direct application of the power to the thresher without gearing; safety, ease of keeping in order, ease and cleanliness of feeding—and for the general perfection with which they do their work.

"Threshing can be done with one-half or two-thirds what it costs with the large six and eight horse power machines.

"They have given entire satisfaction so far as they have been used here." HORACE L. EMERY.

Mediterranean Wheat.

200 BUSHELS of this variety of Wheat for sale, being a portion of an excellent crop of Winter Wheat, raised for the fifth year on the same farm in Greene county, N. Y.

It is two weeks earlier than the Hutchinson wheat and is always harvested before the Rye crop is ready for the sickle. This season it has done better than heretofore, notwithstanding it has improved in quality and yield.

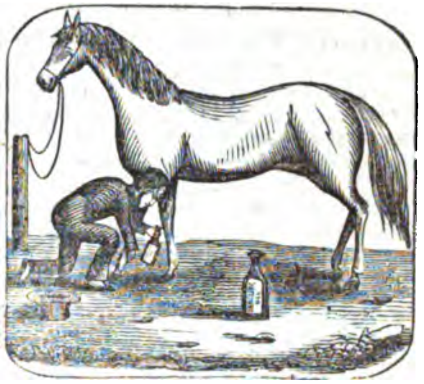
The grain is large, of light color, and weighs, (this crop through) 64 pounds per bushel. It has never been affected by the Weevil, (or wheat midge,) Fly or Rust. This season, the yield was 23 bushels to each bushel sown.

For sale at the Albany Agricultural Warehouse & Seed Store,
Nos. 369 and 371 Broadway, Albany, N. Y.
Sept. 1.—2t. By HORACE L. EMERY.

Dorking Fowls.

SUPERIOR Dorking Fowls will be furnished caged, and put on board ship, with food for their voyage, at $5 per pair, by
N. S. PRENTISS,
Oct. 1—1t. Astoria, New-York.

GEORGE W. MERCHANT'S CELEBRATED



Gargling Oil for Horses.

UNPARALLELLED IN THE HISTORY OF MEDICINE AS THE

Most Remarkable External Application Ever Discovered!

TRUE ECONOMY. The unparalleled success of Merchant's Gargling Oil, in the cure of diseases in Horses and Cattle, and even in human flesh, is daily becoming more known to the farming community. It can hardly be credited, except by those who have been in the habit of keeping it in their stables, what a vast amount of pain, suffering, and time, are saved by the timely application of this Oil. There is nothing equal to it in the shape of a remedy for such diseases as

Spavin, Sweeny, Ringbone, Windgalls, Poll Evil, Callous, Cracked Heels, Galls of all kinds, Fresh Wounds, Sprains, Bruises, Fistula, Stitfast, Strains, Lameness. Sand Cracks, Foundered Feet, Scratches or Grease, Mange, Rheumatism, Bites of Animals, External Poisons, Painful Nervous Affections, Frost Bites, Boils, Corns, Contractions of the Muscles, Whitlows, Chilblains, Chapped Hands, Cramps, Burns and Scalds, Swellings, Contraction of the Muscles, Weakness of the Joints, Caked Breasts, &c., &c., &c., &c.

From the peculiar nature of this Oil, and the unparalleled success it has met with in the hands of the

FARRIER, FARMER, AND STAGE PROPRIETOR,

it is but justice to say, that of the great number of medicines that have been offered, none have been so well adapted to the prompt cure of diseases to which horses are liable; it has been very justly called a complete PANACEA FOR THE HORSE. For instance read the following:

TO OWNERS OF HORSES.

This may certify that I have had for many years the care of from

100 to 200 Horses,

and have made use of Merchant's Gargling Oil for two years past, and can safely say, that for all the diseases that horses are liable to, I never saw its equal. I use about one bottle per month, and recommend it to the public, as the best medicine for horses now in use. E. D. MINOR.

FOR SALE by A. McClure & Co., Burrows & Nellegar, and George Dexter, Albany; W. S. Wood Cohoes; D. C. Constable, Schenectady; Dr. C. Heimstreet, J. F. Prescott, P. D. Orvis & Co., and Wm. Briggs, Troy; Wm. Tucker, West Troy; Heber Walsh and C. S. Casy, Lansingburgh. Also, by respectable dealers generally in the United States and Canadas.

CAUTION TO PURCHASERS.—Beware of Counterfeits, and be sure the name of the sole proprietor, GEORGE W. MERCHANT, Lockport, N. Y., is blown on the side of the bottle, and in his hand writing over the cork.

All orders addressed to the proprietor will be promptly responded to. ☞ Get a pamphlet of the Agent, and see what wonders are accomplished by the use of this medicine.

HORSES.—We would call the attention of that portion of our readers who are in any way interested in horses, to the advertisement in another column, descriptive of the celebrated medicine called "Merchant's Gargling Oil." From the peculiar nature of the article, and the unparalled success it has met with in the hands of those who have the care of horses, it is but justice to say, that of the great number of medicines which have been offered, none have been so well adapted to the prompt cure of most diseases to which horses are liable.—*Detroit Express.*

Oct. 1—1t.

JUST PUBLISHED,

BY DERBY, MILLER & CO., AUBURN,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A GREATLY enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain

THREE HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole making a handsome duodecimo volume, of over 400 pages, at the low price of One Dollar.

DERBY, MILLER & CO.

Auburn, Sept. 1, 1849.—1t.

Wheelers's Patent Railroad Horse Powers and Threshing Machines.

THE subscribers having been appointed agents for selling the above celebrated machines for the city and vicinity of New-York, in place of A. B. Allen & Co., (who have heretofore had the sale of the same,) they solicit the attention of those wishing to purchase.

☞ The farmers of Long Island can be supplied with a machine equally well adapted for their use, and which is afforded at the same prices, without any extra charge for premiums or Patent rights. All are warranted to give satisfaction, or are subject to be returned and the full purchase money refunded. A supply constantly on hand at their Warehouses, Nos. 187 Water Street and 195 Front St., New-York. JOHN MAYHER & CO.

Sept 1.—tf.

Nursery of J. J. Thomas,

Macedon, Wayne Co., N. Y.

THIS nursery now contains many thousand fine trees, of large, handsome and thrifty growth, consisting of Apples, Pears, Cherries, Peaches, Apricots, &c., and the smaller fruits, of the best standard sorts, and most of the finest new varieties; ☞ *in all cases they have been propagated for sale after being thoroughly proved in bearing* ☜

The collection of APPLES, consisting of many thousand large trees, mostly 7 to 9 feet high, embraces the finest standard varieties, and nearly all the valuable new sorts.

Very fine pear seedlings, at $12 per 1000, two year old apple seedlings, at $5 per 1000, Horse chestnuts 1 to 2 ft high, at $5 per 100, &c., &c.

When purchasers desire, selections of the best for affording a regular succession of fruit throughout the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y. Sept. 1.—2t.

Selling Off.

LINNÆAN BOTANIC GARDEN & NURSERY, late of WM. PRINCE, deceased, *Flushing, L. I., near New York.* WINTER & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, the entire stock of this establishment, comprising every description including the newest and choicest varieties of

FRUIT AND ORNAMENTAL TREES,

Shrubs, vines, Plants, Roses, &c., will be disposed of at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of $10, or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by wholesale, will be supplied at such reduced prices according to kind and quantity, as will probably prove satisfactory to them.

Descriptive Catalogues gratis on application, post paid.

Sept. 1, 1849.—2t.

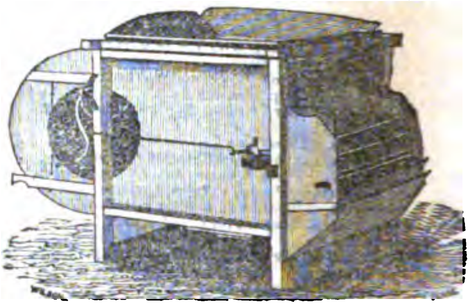
Books for Rural Libraries.

THE following works are for sale at the office of THE CULTIVATOR, No. 407 Broadway, Albany:

American Agriculture, by R. L. Allen, $1.
— Shepherd, by L. A. Morrell, $1
— Poulterer's Companion, by C. N. Bement, $1.
— Veterinarian, by S. W. Cole, 50 cents.
— Herd Book, by L. F. Allen, $3.
— Farmers' Encyclopedia, $4.
— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
Domestic Economy, by Miss Beecher, $1.
Domestic Family Receipt Book, by Miss Beecher, 75 cents.
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruit Culturist, by J. J. Thomas, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50
Farmers' Companion, by Judge Buel, 75 cents.
Lanscape Gardening, by A. J. Downing, $3.50.

I. T. Grant & Co.'s

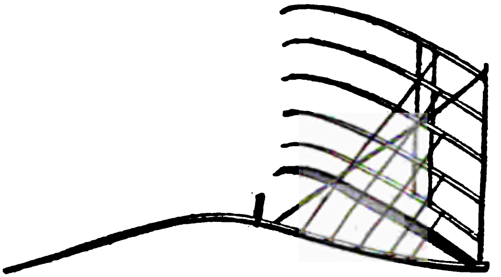
PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon. J. R. Poinsett, of South Carolina:—"The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—"Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T. GRANT & CO.

Junction P. O., Rens. Co., 8 miles north of Troy.

May 1, 1849.—5t. eom.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, at Plymouth' Mass., Pear, Quince, Cherry, Plum, Apple, Paradise and Mahaleb stocks, suitable for grafting in the Spring, and for budding the coming season. Mountain Ash, Elm, Spanish Chestnut. Ash, Maple, Lime, Alder, Larch, Scotch fir, Silver fir, Norway fir, Arbar Vitæ, Balsam fir, from 1 to 4 feet; Cedar of Lebanon, Araucaria imbricata, Deodar cedar, Oaks, Althæas. Hawthorns, Lilacs, Spiræas, Syringas, Deutzias. Acacias, Roses, Honeysuckles, Climbers &c. Raspberries, May's Victoria and other currants, Gooseberries, Native grapes, Foreign grapes in lots for vineries. Myatt's Victoria, Early Scarlet, and other rhubarbs. The best native and foreign *Pears*, 1 to 6 years from the bud, fine thrifty trees and well grown. 40 Select named Verbenas, all of Beck's Pelargoniums, in 23 varieties, including those of last season, being the finest Pelargoniums ever introduced.

Priced Catalogues sent on application.

Sept. 1, 1849.—3t. B. M. WATSON.

Fruit Trees.

THE subscribers offer for sale this fall their usual assortment, viz: Apples, Plums, Pears, Cherries, Peaches, and Ornamental Trees.

The following Pears on the QUINCE.

Louise Bonne de Jersey,
Bartlett,
Virgalieu, (White and Gray,)
Onondaga, or Swan's Orange,
Duchesse d' Angouleme,
New Gray Winter Beurre,
Doyenne d' Ete, or Summer Virgalieu,
Columbia,
Bloodgood,
Vicar of Winkfield,
Beurre Diel,
Dearborn's Seedling,
Leon Le Clerc.

Also, a few hundreds of the European Mountain Ash, of an extra size.

WILSON, THORBURN & TELLER,
Albany, Sept. 1.—3t. Nurserymen.

Syracuse Nurseries.

Thorp, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of *fruit trees* alone, embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and *youthful* growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated NORTHERN SPY, *from seven to nine feet in height*, which they will continue to supply, as heretofore, in an assortment with others, at the *same rate*. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the *Hawley*, the *Green Sweeting*. the *Ladies' Sweeting*, *Peck's Pleasant*, *Swaar*, *Baldwin*, *Spitzenburg*, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the *Onondaga*, *Oswego Beurre*, and *Van Mon's Leon Le Clerc*. Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "*first rate*" Persons desiring to buy at *wholesale*, can be supplied on the most liberal terms, and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters, they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flatteringly bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by *post-paid* application to the proprietors.

August 1.—3t.

John Mayher & Co.

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Sept. 1, 1849.—tf.

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THE proprietor of this establishment confines himself wholly to the propagation of hardy Fruit Trees, all of which have been obtained from the most reliable sources, or cut from bearing trees of well known varieties. About sixty varieties of plums and a large quantity of the Apples have been proved on his own grounds, and all are cultivated with his own hands, assisted by his son, who is soon to assume a personal interest in the business. And all the cutting of buds or grafts, and the labeling of trees, with the oversight of taking up and packing, being done by him in person, he feels confident of being able to give as good satisfaction as to correctness, as can be given at any other nursery. The stock of apples is large, and embraces numerous varieties, so that the Fruit Grower and Amateur Horticulturist can each be supplied.

A liberal discount to nurserymen and dealers in trees.

Seedling stocks of Apples and Plums for sale.

AGENTS—Geo. G. Sheppard, 145 Maiden Lane, New-York; H. L. Stephens, Honesdale Pa., Wm. J. Hamilton, Ringwood, McHenry Co., Ill.

Catalogues sent gratis to all *post paid* applicants

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Sept. 1.—2t.

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THE subscriber has on hand, a few choice White Dorking fowls which he will sell at fair prices—bred by himself. As far as his knowledge goes, this variety of the Dorkings is more sought after, both in England and in this country, on account of their color. L. DURAND.

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Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

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School of Applied Chemistry,

Yale College, New Haven, Ct.

B. Silliman, Jr., Professor of Chemistry applied to the Arts.
J. P. Norton, Professor of Agricultural Chemistry.

THE Laboratory in this department is open during nine months in the year for instruction in the analysis of soils, minerals, ores, &c.

During the summer and autumn terms, there will be lectures on Mineralogy, Geology, Natural Philosophy, Elementary Chemistry, and other useful branches of Natural History.

The annual course of lectures on Agricultural Chemistry, by Prof. Norton, will commence soon after the middle of January, and continue till about the first of April, at the rate of four or five lectures in each week.

These lectures are intended to be delivered in a form quite intelligible to those who never turned their attention to chemical studies. The great principles of Improved Agriculture will be illustrated and explained during the progress of this course in such a manner as to be understood by all. Tickets for the course $10.

Students in the laboratory have glass, chemicals, balances, and other apparatus furnished, and pay $20 per month. Analyses of minerals, soils, &c., made on reasonable terms.

For further particulars apply to either of the Professors.

New-Haven, Ct., Sept. 1, 1849.—5t.

Improved Stock.

DURHAM, Hereford, and Devon Cattle; Saxon, Merino, Cotswold, Leicester and South Down Sheep. Lincolnshire, Suffolk, and Chinese Pigs. All these superior breeds can be had of the subscriber, of the best quality, and shipped to any port of the country. Autumn is the best time to execute such orders.

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Oct. 1—1t. 189 Water St., New-York.

Fruit Trees.

THE subscriber offers for sale this fall, among a general assortment of fruit trees, the following quantity; and a large number of the other leading kinds, which will be sold on reasonable terms, especially by the quantity:

APPLES.

5,000 Rhode Island Greening,
3,000 Newtown Pippin,
2,000 Dominie,
2,000 Belle Fleur.

CHERRIES.

2,000 Napoleon Bigarreau,
1,000 Black Tartarian,
1,000 Yellow Spanish,
4,000 Holland Bigarreau,
30,000 Early Golden Apricot, both on the peach and plum
2,000 Frost Gage plum trees.
2,000 of the same 2½ feet high, $10 per 100.
3,000 Isabella Grape Vines, from 2 to 4 years old.
5,000 strong one year-old vines, for $9 per 100.
500 Large Linden trees.
A large quantity of Fir and Spruce bushes.

Amateurs are invited to call and see the show of fruit on the Frost Gage trees this fall.

CHARLES DUBOIS,
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Allen's Improved Portable Railroad Horse Power and Overshot Thresher and Separator.

THE superiority of this power consists in the facility of driving a machine in either direction, without crossing the belt, simply by the use of an additional pinion. There is less friction in this power than in any other of similar construction, it consequently works easier and will last longer. The materials are all of the best kind, and put together on the best principles, and in the most workmanlike manner. Powers have been made for the last ten years on nearly the same principle as the above, and have given general satisfaction. Every power is warranted to work well.

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UPWARDS of five hundred Plows of the most approved patterns both for the south and the north.

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THE Spiral Blade and Cylindrical Straw and Hay Cutters, of various sizes, either for hand or horse power.

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BEING appointed sole agents in this city, for the above excellent and economical mills, the subscribers offer them for sale at the manufacturer's prices. Also, cast iron and other mills.

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HAND and horse-power corn-shellers of the various kinds, made in a superior manner.

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GRANT'S Patent and several other kinds of fanning-mills, suitable for cleaning rice as well as grain.

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THE different sizes of rice hullers, with recent improvements manufactured expressly for us.

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OF all sizes, from 6½ to 10 cents per lb.; suitable for fences

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THE celebrated white-flint, and other improved varieties of wheat, suitable for fall sowing.

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THE best kinds of winter rye.

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A Prime article, constantly on hand.

RAY GRASS AND LUCERNE,

AND all other European Field and Garden Seeds suitable for the American climate, fresh imported.

A. B. ALLEN & CO.,
Oct. 1—1t. 189 & 191 Water St., New-York.

To Wool Growers, and those wishing to purchase Merino Sheep.

FOR SALE, low, about 175 Merino Ewes. The original stock were obtained of J. T. Rich, of Shoreham, Vermont, and Messrs. D. & C. B Cook, of Charlotte, Vt.—the latter gentlemen having recently obtained theirs from Mr. Atwood's and other celebrated flocks in Connecticut. The lambs and yearlings are from Atwood's and Rambouillet Bucks. Also, about sixty bucks of different ages, mostly young, bred by the subscriber. The average weight of fleeces, four pounds, nine ounces, washed wool.

Address RICHARD KEESE,
Oct. 1—tf. Keeseville, Essex County, N. Y

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

New Series. ALBANY, NOVEMBER, 1849. Vol. VI.—No. 11.

Foreign Correspondence.

Letter from Prof. Liebig's Laboratory.

Giessen, August 20, 1849.

Editors Cultivator—A voice from this quiet little town of Giessen, would scarcely have made itself heard amid the roar of revolution that has been coming to you for the last eighteen months. Who wanted to hear about chemistry, when all Europe had converted itself into a laboratory of decompositions and recompositions on a so much grander scale? Meanwhile, things have moved on here very much as usual. The little town so well known to your readers through your old correspondent, Prof. Horsford, has, it is true, aroused itself sufficiently from its scientific repose, to amuse itself with a barricade or two in miniature; but, for the most part, it has been very quiet. An American can hardly comprehend how, amid such stirring events, there is so little general excitement. At home, who would be satisfied, high or low, without having read the last paper, without being in possession of the last item of news. Here there is no such evidence of intense interest in the mass of the people. The old passivity hangs still around them. No one is satisfied with things as they were, or as they are; all would like to see a radical change, but where are the men inclined to act? There are, it is true, a great many difficulties in the way of such a change. First of all, the fact that such a majority of the educated and influential among the people are directly in the pay of the several governments; that is, are office-holders. Almost every profession is made into an office here. Clergymen and professors, for instance, are directly supported by government. One word too freely spoken, and the supplies are stopped, to say the least. Again, the ignorance of that large class, he peasantry, is a great obstacle in the way of a radical change. Men must understand and feel their rights before they can assert them—they must feel their power also. Again, the strong sectional feeling. A revoluion arises for instance in Baden. The army passes the Hessian frontier, expecting support. Somebody calls he advance an invasion, and down comes the Hessians pon the invaders. In the Prussians, this sectional feeling may be dignified by the name of national pride. Not that they are proud of their king, but of the power f the nation. Authority brings them into the army, ear holds them there, and makes them the instruments f the power they hate, and this petty gratification of ride of national power is their only reward.

Prussia is said to be at present concentrating a large orce upon the Austrian frontier. The prospect of this emonstration is sufficiently obvious. It is a terror for he south and east, in case of a refusal to come into the orthern alliance. It is a good omen for Hungary, but r Europe, who shall say what it forebodes? The uth, involved as Austria is, in that most unjust of all wars with Hungary, cannot stand alone against the power of the north, but this does not make submission the more probable. May it not reckon with reason on foreign assistance? Would England, France or Russia regard with indifference the increase of the power of Prussia, that would result from such a war?

But enough of politics. Liebig's summer course of lectures is nearly at an end. To-day, we had that most interesting chapter of modern science—the mutual relations of animal and vegetable life, particularly with reference to the atmosphere. In the hands of Liebig, this theme already trite, becomes invested with all the interest of a new discovery. And how beautiful in truth this arrangement of nature, according to which, each plant in its every breath, is a minister to the wants of animal life, purifying the air upon which it depends for existence, and in turn, deriving its own life and beauty from this act of beneficence. The discussion of the origin of the nitrogen of plants was one of the main points in this lecture. Liebig's views on this subject are known to your readers, through his work on Agricultural Chemistry. The ammonia of the atmosphere is a principal source. The determination of its amount recently made by Freseneus, may be interesting in this connection. He found about 1-3,000,000 carbonate of ammonia in the air of the day, 1-2,000,000 in night air. How such small quantities are estimated must appear mysterious to those unacquainted with the method of effecting it. The means are, however, very simple. To give an idea of the matter, we will suppose a hogshead filled with water, supplied with a cock below and an opening in the head above. On turning the cock the water runs out, and a corresponding volume of air comes in above and takes its place. If the water that has escaped is measured, we know that for every quart of it, we have a quart of air in the hogshead. Thus it is perfectly easy at any moment, to know how much air has come in through the opening above. Now we will suppose the hogshead full again, and to this opening a tube fitted, loosely filled with a substance that has such an affinity for ammonia, that it absorbs and retains all that approaches it. The cock is turned again; we let, say a hundred gallons of water run out and stop it off. One hundred gallons of air has consequently come in through the tube above, and left all the ammonia behind. We have the ammonia fast. All we have to do now is to weigh it; suppose it is a half grain; then a hundred gallons of air contain a half grain of ammonia.

From a recent English paper, I see that the fabrication of carbonate of ammonia, naptha, soda, &c., from peat, is commenced on a large scale in Ireland. The amount of the products must be overstated, but I believe this manufacture might be pursued in America with advantage. Ammonia has for years, been obtained in large quantities, incidentally in the manufacture of burning gas from bituminous coal. It owes its origin to the nitrogenized constituents of the plants from which the coal is formed; on distillation, the nitrogen and carbon share the constituents of water, forming carbonic acid and ammonia.

I have observed in the recent agricultural journals, certain new methods for the prevention of the rot in potatoes. With Klotzch's method of clipping the sprouts, when the plant is seven or eight inches high, and then again, four or five weeks later, you are probably acquainted. It does not seem to have realised the expectations excited by his statement. A farmer in this vicinity tells me that he has tried the method without success. It seemed to increase the vigor of the plants, but did not prevent the rot. Klotzch warns against cutting the sprouts more than half an inch.

A correspondent of the Agricultural Journal for Rhenish Prussia, recommends piercing the potatoes to be used for seed with a wooden instrument (the holes to be two or three in number and to reach the centre,) and then soaking them in water containing from two to three per cent. of sulphuric acid (oil of vitriol.) He supposes the infectious matter thus destroyed. He advises also plucking the blossoms to prevent infection from other fields, and planting deeper, inasmuch as it has been observed that the potatoes nearest the surface are generally most diseased. He professes thus to have raised potatoes, almost without exception, sound, while alternate hills, not thus treated, were very much diseased. Another correspondent of the same Journal uses gypsum, throwing it over the plants when moist with dew, and has equally conclusive evidence of the value of this means against the rot. He supposes the gypsum to act where applied, that is, upon the leaves and stalk. How it can act here, it is hard to say, for the usual conditions of its action are not present.

John Flock, of Montabour, Nassau, has recently published the following method as a specific against the rot. He leaves rather larger intervals than usual between the hills. When the plant has reached a convenient size, he hoes up the earth against it on one side, to one half its height, then bends the plant over horizontally, and forms the hill so that an inch or two of the plant projects from the middle of the slope. The plant on further growth, makes an angle at this point. The object of the contrivance is to lead off the rain, which otherwise follows the stalk to the roots, and carries with it the matter which causes the disease in the tubers. This view of the progress of the disease, acquires probability from the fact that after a rain potatoes before sound often become diseased and rot rapidly—again, from the fact that the disease commences on the outside of the tuber, and is worse nearest the surface of the ground; further, from two observations of Mr. Flock, that suggested his method, namely, that there was always most disease in the hills whose plants grew straightest, and consequently, through the influence of the wind, formed a funnel-shaped opening about the roots, which gave the rain easy access; again, that where the manure was applied in such a form and manner as to protect the roots in a degree from the rain, there was always least disease.

One of the recent chemical journals contains the records of a very interesting series of experiments on the necessary inorganic constituents of the oat plant. Single grains were sown in pure charcoal, prepared from sugar, this being contained in little tin vessels lined with wax. Without addition of any thing to the charcoal, a plant was obtained, but it was very small and sickly. Ammonia salts alone produced a plant of a lively green color, but still small and weak; increase of these in a second and third experiment killed the plant. The mixture, whose composition is given below. *exclusive* of ammonia salts, gave a plant of double the size. On supplying in another experiment, all the salts of the mixture, the weight of the plant was quadruple the last, but still weak for want of iron, as another experiment proved. The mixture,[*] with addition of oxide of iron being furnished, a much finer plant was obtained, but withered spots appeared upon its leaves. In another case, where the salts of the last experiment were not supplied, with addition of a little carbonate of magnesia, no such appearance was observed, and the plant was beside in all respects materially improved. It was ascertained further that soda could not be substituted for potash, nor magnesia for lime, without injury to the plant. Many other experiments with omission of individual constituents were made, from which it was inferred which are essential and which not. The conclusion from the whole investigation was that silicic, phosphoric and sulphuric acids, potash, lime, magnesia, iron, and manganese are essential constituents of the oat plant. The investigation was commenced so late in the season, that the development of the grain could not fairly be considered. The above conclusions have no reference to this point. More phosphates in proportion would certainly be required.

I give you below, the results of my *own* analysis of the ash of oats. The dry grains yielded 4.71 *per cent.* of ash. This ash contained, expressed in per cent., silicic acid, 53.97; sulphuric acid, 0.49; phosphoric acid, 17.35; lime, 3.00; magnesia, 7.08; potash, 12.94; soda, 2.02; oxide of iron, 0.60.

Prof. Liebig is at present engaged in re-writing his Animal Chemistry. Many of the chemists in his laboratory have been consequently engaged with investigations in this department. We are often rewarded with most interesting results; for instance, as the result of an investigation shared by three among us, we find that the composition of the inorganic part of the blood, of urine, and of the aqueous extract from meat, are most strikingly similar. The result was to be expected on theoretical grounds, but it was interesting to prove it. Such facts are not alone interesting—they are of important application. Another investigation, not however, very recent, proves that the whole character of the blood can be changed at will, and that in a very short period, by change of diet. I do not refer to a mere variation of the proportions of its constituents, but to *such* a variation as implies a material change of character, as for instance, the replacement of its alkaline phosphates by carbonates. That the influence of such a change in the constitution of a fluid that bathes all the nerves and tissues of the animal frame must be a very material one, is evident. Its efficiency in the treatment of disease, has been by no means fully tested.

You shall hear from me again soon.

Very truly yours, John A. Porter.

Household Comforts.—The female editor of the Pittsburgh Visitor, in recommending comfortable and *cheap* furniture for farmers' houses, in the form of settees or lounges, makes the following remarks: "I can tell no reason why rich folks, who do not work, should have *all* the comforts of life, while any one who pleases might have a good share of them by only thinking of it. I have many a time gone into the houses of rich farmers, when I thought their best room was not half as comfortable looking as their *barn*. Here one could find a nice place to loll and rest on the hay and straw but there, there was nothing but bare benches and chairs to sit on, bolt upright."

---

[*] Composition of the mixture:

0.14	grammes	Silicate of Potash.	
0.50	"	Carbonate of Lime.	
0.04	"	Phosphate	"
0 10	"	Sulphate	"
0 04	"	Carbonate of Magnesia.	
0.10	"	Nitrate of Ammonia.	

A gramme is about 15½ grains.

The Relations of Science to Agriculture.

We copy the following from the last No. of the Journal of the Transactions of the Highland and Agricultural Society of Scotland. It was written by Dr. ANDERSON, chemist to the Society, and its practical and common sense view of the subject, will commend it to the attention of our readers:

The application of science to agriculture is a subject on which so much has been said and written, during the last few years, and which has occupied so much of the attention of the agricultural public, that it may seem almost superfluous to add to what has already been penned. It has always appeared to me, however, that there are still many points of great importance for the practical man to consider, which have either never been sufficiently prominently presented to his view, or which, from their being less striking, or perhaps less enticing, have been allowed to fall into the background, and have hence led to a certain amount of misapprehension in regard to the exact position of science and its relations to practice. Such misapprehensions it would be desirable under any circumstances, to dispel; but now that the Highland and Agricultural Society has actively taken up the prosecution of agricultural chemistry, it is of primary importance that the farmer and the chemist should come to a distinct understanding with regard to the mutual bearings of scientific and practical agriculture—the manner in which they can be made to assist one another—and, what is of all others the most important point, how can they be made to co-operate, so as to establish on a firm basis the general principles of agricultural science, which must necessarily be the first step towards the development of scientific practice. Under these circumstances, I have thought that I might advantageously refer very shortly to some of these matters, and point out what we are in future to expect from the application of chemistry to agriculture, the more especially as it is not very difficult to perceive that the interest which attached to it has somewhat abated with the general public, though I believe it to be undiminished with our most active and intelligent practical men.

This very diminution in the interest attaching to chemical agriculture, I believe to be mainly founded on one of the most serious misapprehensions—serious alike to agriculture and to chemistry—with which we have now to contend; and that is, the erroneous and altogether extravagant expectations which some persons entertained, regarding the extent and rapidity of the influence which chemistry is likely to exert upon agriculture. To hear them talk of it, one might almost imagine that chemistry, as by the wand of a magician, is at once to spread fertility over our barren moors, and raise abundant crops where nothing ever grew before; and that the chemist can by a few simple experiments, determine with absolute precision the circumstances under which the farmer must go to work, so as to produce an abundant crop. It needs not to be mentioned that such views are the exception, not the rule; but, between this extreme case and those likely to be fulfilled, there are many expectations which, with less apparent extravagance, are equally beyond the powers of chemistry in its present imperfect state, and involve questions which, if they ever can be answered, must await the advance of pure science to a point much beyond that to which it has yet attained. Nor is it, perhaps, matter of much surprise that such expectations should have been entertained, as it must be admitted that the general public is not in a position to estimate correctly the extent of the benefits which it is likely to derive from the application of science to any art; and, unfortunately, in the present instance, it has been misled by the far too laudatory terms in which the application of chemistry to agriculture, was talked of some years ago. Hopes were then excited which, to those intimately acquainted with chemistry, it was very evident could not be sustained, but which the enthusiastic embraced at once; only, however, when they were disappointed, to abandon as worthless, the whole science itself, along with the unobtrusive modicum of real progress, which was altogether lost sight of amidst the ruins of their lofty expectations. Even those who take a more cautious and sober view of the progress of agricultural chemistry are apt to be led into expectations greater than facts justify, by the extraordinary progress which the application of chemistry has effected in some other arts, such, for instance, as the art of bleaching and the manufacture of soda, which chemistry, by one great stride, raised from the state of primitive rudeness in which they had existed almost from time immemorial, to one at least of comparative perfection. Such facts may lead us at first sight to expect that the application of chemistry to agriculture should be followed by equally rapid results; but a little further consideration seems to point out a very material difference between such arts and the cultivation of the soil. In such a case as the manufacture of soda, for instance, and indeed in all those in which the application of science has produced the most marked results, the chemist has presented to him for solution a definite and circumscribed problem, involving the mutual relations of some three or four different substances; and he is able to trace the changes which the coal, common salt, and lime employed, undergo, from the commencement of the process through each successive step, until the soda is obtained in the perfect state; but in the art of agriculture each question frequently involves, not one, but many problems, connected with the highest and most abstruse doctrines of the science, in which not merely chemical forces, but the far more recondite phenomena of life come into play, and in which the investigations of the chemist are carried on, and his conclusions tested under the influence of weather, climate, and many other perturbing causes.

The extreme complexity of the problems with which agricultural chemistry has to deal, may be conceived from the fact that most plants contain from twelve to fifteen different substances, all essential to their existence, the relations of which must be investigated before definite views can be obtained regarding the changes which go on in the organism of the plant. These relations, moreover, are far more complicated than even the number of the elements alone would lead us to suppose: the single element of sulphur, for instance, which does not constitute more than two or three parts in the thousand of most plants, exists there in not less than three different forms of combination, in each of which it is as essential to the plant as those which form the great proportion of its bulk. Now, it must be sufficiently manifest, that questions involving elements of such complexity are not to be solved as rapidly or easily as the far simpler problems of mineral chemistry, and that not merely on account of their superior complexity alone, but because, in the one case, theoretical chemistry sets us far on our way towards the solution, while in the other there is still a great gap to be filled up, a whole mine of scientific facts to be worked out, before we are in the condition to approach sufficiently near the comprehension of these more complicated phenomena. In fact, the latter are not questions of *pure* chemistry, but are intimately interwoven with vegetable physiology—so much so, indeed, that in many instances it is scarcely possible to decide to which of these two sciences they ought strictly to belong. And it is just herein that their great difficulty consists, for there is nothing more certain, than that those questions which lie, so to speak, on the confines of two sciences, require for their successful investigation a high degree of development of both the sciences on which they depend. Now, chemistry is still far from having attained all that development of which it is capable, as the time during which it has been cultivated has not been sufficiently long to admit of much progress, except in special departments. Few of those who are not themselves chemists, are aware that the facts and doctrines of modern chemistry have been determined during little more than the last sixty years; and that, with few exceptions, all the laborious investigations of the older chemists, and, without exception, all their general doctrines, were then swept away, to be replaced by the science as it now exists; while organic chemistry, with which agriculture is more intimately connected, has been successfully prosecuted for not more than half that period.

To expect any *rapid* advances, in the practical applications of agriculture, of chemistry in its present state, is manifestly unreasonable. The progress must necessarily be slow, in some instances almost imperceptible; and much must be done which at first sight the practical agriculturist may be inclined to consider altogether foreign to his object. Extended researches will frequently be requisite which do not directly lead to practical results—that is to say, which are not immediately convertible into an equivalent of current coin, but which are the foundation of such results, and form the starting point of perhaps a very different series of experiments, having an immediate bearing upon practice. It is of great importance that this should be distinctly understood and borne in mind, for it is by no means uncommon to suppose that nothing more is necessary than at once to convert scientific facts to practical purposes; while, so far from this being the case, the agricultural chemist has a two-fold duty to perform—he must both determine the scientific facts of agriculture, and eliminate from them the practical conclusions to which they lead. It may, perhaps, be said that the establishment of these facts falls within the province of the pure chemist. But if this principle were to be acted upon, the progress of chemical agriculture would be slow indeed; for the investigations of the pure chemist lead him now, and are likely for a very long period to lead him, in directions very remote from those most likely to afford the materials which the agricultural chemist requires to work upon. The latter would, therefore, require to sit idly waiting till the former supplied him with facts, which his own exertions would have enabled him to ascertain. Nay, the agricultural chemist may even do a better service to agriculture, by pursuing the investigation of those apparently theoretical subjects, than by directing himself to those which seem to have the most immediate practical bearings.

There is another point on which there has been a good deal of misunderstanding between the chemist and the agriculturist, which is intimately connected with the erroneous estimate of the extent and perfection of chemistry. It is not uncommonly supposed that the chemist is in the condition at once to solve, by the investigations of the laboratory, all such questions in practical agriculture as may happen to be submitted to him—that he can determine when nothing else can, why certain methods of cultivation are successful, others unsuccessful. It is just possible that he may in some instances be able to do this, but far more frequently his researches enable him not to state positively what is or what is not the case, but rather to draw a probable conclusion—to form, in fact, a hypothesis, which is not in itself a truth, but which must be further tested by experiment in the field, whereby it may be either confirmed or entirely refuted. Now, very unfortunately, this hypothesis is often taken for a positive statement; and when it turns out to be erroneous, it is immediately held up as an instance of the fallacy of science by those who, not being themselves acquainted with the method of investigation by experiment, are unaware that all scientific facts are developed in such a manner. No one ever thinks of going fortuitously to work, when he proposes to determine a scientific fact. He first weighs all facts of a similar character, or having a bearing on the subject which he desires to elucidate, and then founds upon these a hyyothesis, the truth or fallacy of which is to be tested by experiment. Now, without any explanation, it has frequently happened that such hypotheses have been handed over to the practical man, whose field experiments having refuted them, he has forthwith abandoned the science which seemed to him to give erroneous results, not knowing that these results were only in progress of being arrived at by those very experiments which he was engaged in performing. The very same process has been employed in the application of science to every other art; but the difference between them and agriculture is, that, with the former, the hypothesis is formed and the experiments executed by the same person; in agriculture, the hypothesis must in many instances be handed over for experimental elucidation to the practical man. The many failures which are made in other arts remain unknown to all but those by whom they have been made, while in agriculture they become known to all and sundry; and by them it is not understood that, though these results are negative, they still serve to bring us all nearer to the truth.

And this leads me to observe, that the true manner in which chemical agriculture is to be advanced, is not merely by the exertions of the chemist, or the labors of the laboratory alone. It must be by the simultaneous efforts of science and of practice, each endeavoring to develop, with care, steadiness and accuracy, the facts which fall within its province. Nor must each pursue its own course irrespective of the other. They must go hand in hand, and, taking advantage of each other's experience, and avoiding all sort of antagonism, they must endeavor to co-operate for the elucidation of truth. The chemist and the practical man are, in fact, in the position to give each other most important assistance. The one may point out the conclusions to which his science, so far as it has gone, enables him to come; while the other may test these conclusions by experiment, or may be able, from his experience, at once to refute or confirm them. But it will not do to imagine that there is here, either a triumph or a defeat. Such a spirit cannot be anything but injurious. It is rather to be looked upon as a fortunate state of matters, which, admitting of the examination of our own conclusions from two different points of view, directs us with the greater certainty in the path of truth.

For the development of agricultural chemistry in this manner, the Highland and Agricultural Society appears to me to possess peculiar advantages. It has within its own body a large number of members, who are both able and willing to assist in furthering its views in this direction by experiments in the field; and I am glad to say that some are actually already commenced, the results of which I hope, at no very distant period, to communicate to the Society.

As it may be interesting to the members of the Society to learn the nature of these investigations, I shall state very shortly, the method in which we propose to pursue the work of the laboratory. Our plan is, as far as possible, independently of the ordinary analyses of manures and the like, to carry on two different classes of researches. 1st, Extended investigations on subjects of interest and importance, and the completion of which must necessarily occupy a considerable period; 2d, shorter investigations of subjects of a more circumscribed character, which do not occupy so long a period, and 3d, subjects which, from their consisting of isolated portions, may be taken up in the intervals which occur in the investigations of other matters.

In the former of those classes of investigations we are now engaged with a series of experiments for the purpose of determining, as far as chemistry can, the relative feeding values of different grains, and other ordinary sorts of cattle food—our object being so to determine their values that the farmer may know what quantity of any given sort of food he ought to substitute for that he has ordinarily employed, when the price of the former falls so low as to make it advantageous to use it. In this way the farmer will be enabled to employ the produce of his own farm, in place of disposing of it at low rates, and purchasing foreign cake or other foods. The subject is one of considerable difficulty, but when completed it will, I hope, serve to throw some light upon the principles of successful feeding; and it is our intention to extend it to our root crops, and to the different sorts of grass employed for hay, as opportunity may offer. Another question, now under investigation, is the alleged inferiority of the butter of cows fed with turneps grown with guano, to that of those fed with turneps grown with ordinary manure. I do not expect, however, that we shall be able to complete this till the close of the present season, as it was begun at too late a period to admit of our obtaining the turneps of the last crop in their best condition. Turneps, however, are now being grown both with and without guano, by means of which we shall be able to investigate this matter more fully than we have yet been able to do. In connection with the turnep crop, we have also made arrangements for determining the cause of the different feeding value of turneps grown in high and low districts, and the chemical department of which will be entered upon as soon as the turneps now being grown expressly for this purpose, are ready.

The subjects belonging to the second and third classes are of too special a character to render it necessary for me here to go into any details regarding them. I shall only mention that one is a careful series of analyses of standard soils from different parts of Scotland—a thing which is much wanted; for, notwithstanding all that has been done in agricultural chemistry, we are still very far from having a correct knowledge of the constitution of the soils best adapted to different crops.

It will be seen, from what I have now mentioned, that we are occupied with a large amount of work, the satisfactory completion of which will require a considerable time, but from which, I trust, we shall obtain results alike creditable to the Society and advantageous to agriculture. Of this I entertain little doubt; but I may be permitted to observe, that my chief fear for agricultural chemistry is, that the constant craving after immediate results on the part of the agricultural public, may lead to the publication of hurriedly and imperfectly performed investigations. The chemist knows well how desirable it is to weigh and repeatedly to examine all his results, and to proceed cautiously and slowly; while the agriculturist, though in his own operations he is content to cast his seed upon the ground, and wait patiently for the harvest, is too apt to imagine that the tree of science bears fruit at all seasons, though, in point of fact, the patient waiting for results is a most necessary element of scientific progress. If this error is avoided, I am convinced that good results will be obtained, and that all men will in time be convinced that the slow and careful determination of scientific facts, is likely to become one of the most important assistants in the improvement of practical agriculture.

Take care of all vegetables and fruits before the frost becomes severe.

Practical Farming.

Premium Farm of E. C. Bliss, Westfield.

In our September number, we gave the statement of Mr. Foster, who received the first premium on farms, from the N. Y. State Agricultural Society. We herewith present from the *Transactions*, the statement of Mr. E. C. Bliss, of Westfield, Chautauque county, who received the second premium for the best cultivated farm.

Soils, &c.—My farm is situated 2¼ miles south of Lake Erie, and 60 west of Buffalo. It contains 110 acres of arable land, and 40 of wood land, in all 150 acres. The soil varies. Some sandy loam, some gravelly loam, and some clay; with clay subsoil, no limestone, nor rocks, but sufficient sizeable stones for all needful purposes on the farm.

Rotation.—I manure well and pursue generally a three years' rotation of crops. For clay soil; first a good coat of coarse manure on the turf, then plow and harrow, fitting it for corn or other hoed crop. After removing this crop, the same fall, the ground is again plowed and harrowed, and fitted for getting in an early spring crop. In the spring sow to some small grain. After this crop is removed, manure again, plow and fit for the third spring crop, which is usually barley, as that is preferable for seeding with. Then seed with clover or timothy. Gravel and sandy soils are treated some different, as they are suitable for winter wheat. After manuring and plowing well, in preference to summer fallow, I sow to peas, or peas and oats; in the fall sow to winter wheat. By this management I have raised 21 bushels peas per acre. The following crop of wheat averaged 28¼ bushels per acre. Upon removing this crop, I next plow the ground, and apply fine manure, then drag well and sow to winter wheat, and in the spring sow to clover.

Plowing.—The usual depth is from 6 to 8 inches. In all cases as deep as the plow will run and turn the turf well. The effect of this deep plowing is good, although on clay soil the first crop will not be better than that of shallow plowing, still the succeeding crops will be far better.

I have in one instance tested deep and shallow plowing. I divided a field into two parts, and plowed one part four and the other ten inches deep, and planted both to corn. The first crop proved the shallow plowing the best, but the following year I pursued the same course with the same pieces, and found the deep plowing produced a crop nearly double the shallow; a convincing proof to my mind that deep plowing is much preferable.

Manures.—About 40 loads per acre. I throw the manure from stable windows under temporary sheds, in order to protect it from rains, having one cellar 18 by 25 for manure, over which are stabled 6 horses through the winter. My means for making manure are through my horses, cattle, sheep and hogs, to which I feed hay, carrots, potatoes, corn fodder, &c., during the winter. The sheep are principally fed under large sheds, from racks made for the purpose. Each of my yards has a basin dug to retain all the fine particles of manure, urine and wash of the yard, besides having a large basin in my barn yard for the same purpose. Part of my straw I stack in the yards, and the remainder reserve for bedding for the different animals during the winter, and keeping the yards well littered, &c., all to increase the manure. My horses and cattle are all fed from stables during the winter. My hog pen and yards are another great help in making and collecting manure. Their manure is thrown from the pens into a yard, together with all refuse from the kitchen, occasionally a few loads of leaves, coal dust, horn shavings, refuse hair, and lime, &c., from the tannery. The store hogs have access to this yard, and by this means it is all worked into good manure. This yard is under cover. I usually manufacture about 400 loads annually, and apply it all, and for the last 5 years I have purchased about 200 loads annually, from the village (1 mile distant,) and appropriated it all to use, paying one shilling per load. The most part in its long or green state, applied to fields designed for hoed crops. What is obtained from the village and barn yards during the summer, is hauled into the fields and piled, to be applied to small grain as wanted after sufficiently rotted; piles covered with earth or leached ashes.

I have used lime on wheat several times, and with good results; by spreading it from the wagon with a shovel after it was air slaked, at the rate of 30 bushels per acre. Have applied plaster in the usual way to clover, and derived a decided benefit; also applied it to corn hills after the first hoeing, about half a gill per hill. Some seasons it has been beneficial, but others I have reaped little or no gain. In one case, used salt as an experiment. After fitting one acre well for flax, to one quarter of it I applied half a barrel of salt, to another quarter 6 bushels slaked lime, but to the remainder nothing, and sowed the whole to flax. There was no perceivable difference between the part containing the salt, and that of the lime, so I harvested them together, and the other half by itself. The final result was that I obtained 2¼ bushels seed, and 52 pounds lint more from the part having the salt and lime, than from the other. I have also used about 150 bushels of horn shavings, (obtained from a comb factory) on corn, by applying a single handful to each hill, previous to putting in the seed. According to the best estimate, the crop was increased from 15 to 20 bushels per acre. But as none of the field was exempt from the shavings, we could not tell the precise amount. Comparing it with previous crops on the farm, it exceeded any by 20 bushels. I have also used muriate of ammonia for soaking seed corn, but perceived no benefit.

Tillage Crops.—I have tilled about 35 acres this season. 10 acres winter wheat, 8¾ acres corn, 3¼ acres spring wheat, 4 acres oats, 2 acres barley, 1 acre flax, 1 acre beans, 1¼ acres broom corn, 1 acre potatoes, 2 acres peas, ¼ acre turneps, ¼ acre carrots. The ground on which the oats, potatoes, and part of the corn was raised, (amounting to 8 acres) has this fall been sown to winter wheat.

I usually sow 1½ bushels winter wheat per acre, from 10th to 20th September; if later, 2 bushels seed, always soaked in strong brine, and dried by rolling in plaster or slaked lime. Barley, brined and limed, sown April 18th, 3 bushels per acre. Spring wheat sown at the same time, 2 bushels per acre, brined and limed as the above; 3 bushels oats per acre, sown April 4th; flax sown 17th April, 1 bushel per acre. The ground for these spring crops is usually plowed and dragged in the fall, so as to be ready for early sowing in the spring, and in the spring I harrow the ground again previous to sowing, and after sowing harrow again, and pass over with light roller. My crops are all harvested in the usual way, by cradling or reaping, and threshed by machine. Corn planted from 10th to 20th May, about 8 quarts per acre, 3 feet one way, and 1½ to 2 feet the other, and thin out to three stalks in a hill. The corn is usually cultivated by passing through with cultivator or drag, and hoed twice, but avoid hilling as much as possible. It is all cut up in September, husked and housed as soon as practicable, usually from 60 to 80 bushels per acre; have not yet ascertained the amount of the present crop. From the 4 acres oats, I have 241¼ bushels; 46¼ bushels barley per acre. Beans 32 bushels per acre. Winter wheat not yet all threshed, but judging from what has been threshed, it will go over 25 bushels per acre. Potatoes about 300 bushels per acre, with 22 bushels seed planted. Of peas, I usually sow 4 bu. per acre; product about 20. One small lot of wheat on new land, went over 40 bu. per acre.

I prefer long manure for all hoed crops, spread on the surface and plowed under in the spring. For wheat and other small grains, I prefer using it in a slightly decomposed state. This manure is spread on the ground after plowing, and then mixed with the soil by harrowing. Usually 40 loads per acre for hoed crops, and vary the amount for small grains, according to the condition of the soil.

For all hoed crops, the manure is covered as deep as the team can turn it under with the plow, on any of my soils, while for small grains it is spread upon the surface and mixed 3 or 4 inches deep.

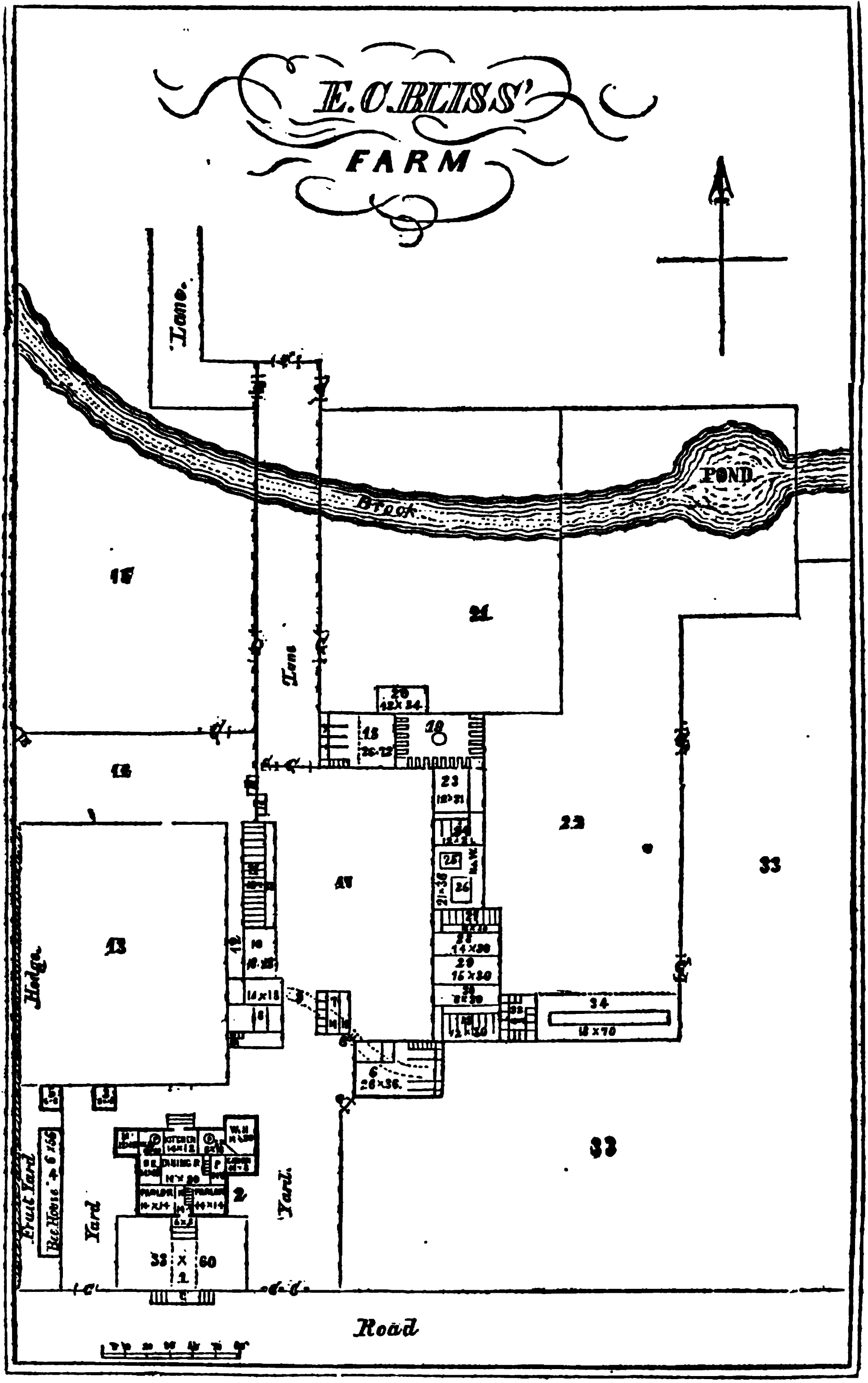
My potatoes have been slightly affected for several years. I know of no remedy. The early planted ones usually do the best.

Grass Lands, &c.—Principally timothy and clover. From 14 to 16 quarts timothy seed are sown in the fall with wheat, or in the spring with barley or spring wheat. About 8 quarts of clover seed is sown on *light* snow in March, upon winter wheat, or in April *or* May with spring wheat or barley.

I usually cut from 35 to 40 acres of hay annually; this year averaged 1¾ tons per acre; some seasons not as much, and others more than this. My timothy is cut before fully ripe, or previous to the blossoms dropping. It is mowed down and laid in swath during the day; the following morning it is shook out, and in the afternoon raked up into winrows, and is either left in the winrow, or cocked up until the next day, when it is again opened if not sufficiently dry, and in the afternoon it is housed. The clover is usually cut before the timothy, and as soon as the heads are in bloom. This hay is mown and shook out the same day; the next day it is raked and cocked, and allowed to remain in the cocks two or three days. They are then opened in the forenoon, and in the afternoon put in the barn.

Draining.—A small piece of land has been reclaimed, which was formerly so wet and boggy as to be useless. The following manner was pursued: First enclosed it with a ditch, then from different parts of this, dug several, partly across the piece. This so dried the ground as to enable me to draw on stone, and stone up all the ditches. They were stoned in the usual way, by placing two rows of stone from 4 to 6 inches apart, and then covering with large flat stones, after which it was covered with earth. This so drained the land, that the next season I removed all shrubs and bushes, plowed and planted it to potatoes and corn; raised a middling crop considering the ground. The succeeding crops were oats, flax, barley, and seeded with timothy, half bushel seed per acre. These crops were all very good, (some took county premiums.) This season, about the middle of July, this piece was mowed, and after well hayed, was raked up; for the purpose of forming an estimate, per acre, one load was taken to the village and weighed; the result was 3½ tons per acre, as near as could be calculated. This field was again mowed in October, well hayed, and a load taken as before and weighed, from which an estimate was made; the result 2¼ tons per acre for the second crop, making 5¾ tons in one year. I have also practiced underdraining on my farm, which has served two purposes: First, benefiting the land, making all wet spots dry and suitable for plowing. Second, a portion of these drains are centered in a large reservoir, from which the water is conveyed in cement pipe about 60 rods to my farm buildings, and thence distributed by leaden pipes wherever desired, always having an abundant supply of water. The amount of underdrain is rising 600 rods.

Domestic Animals.—One pair working oxen, 4



85—PLAN OF E. C. BLISS' FARM.

cows, 12 young cattle, Hereford bull, 1 span work horses, 1 of breed mares, and 4 young horses. These breeds of cattle are not pure blood, but crosses of Devonshire, Durham and native.

My cattle are all wintered in good warm stables, and furnished with corn fodder, chaff and roots as long as they last, then have hay, cob and corn meal the remainder of the winter. In pleasant weather they are allowed to run in the yards through the day, where they have access to straw stacks and water. In this manner my cattle are kept in a thriving condition through the winter.

About 300 lbs. butter and 200 cheese are usually made per annum from four cows, and after the usual manner.

The number of sheep is 200. They are from one-fourth to full blood merino, averaging about 3 lbs. per fleece. About 200 lbs. of this is manufactured at home; the residue this year sold for only 25 cents per lb. in our place. About 100 ewes produce lambs; from 90 to 100 lambs reared. Sheep are very low here now; the butchers will pay only from $1 to $1.50, and for lambs from 62½ cts. to $1.

My sheep are wintered in yards, provided with water, and good sheds, with racks and troughs under them, where I feed with hay, straw, bean and pea vines. Usually commence feeding my breeding ewes with oats, oil meal, or broom corn seed, about the first of February. Usual loss, 3 per cent. per annum.

My swine consist of 1 Leicester boar, two Leicester sows, six barrows now fattening, and nine pigs, all the above-mentioned breed. These swine are furnished with the refuse of the farm and kitchen during the summer, and have access to the pasture and falling fruits of the orchard. Those intended for fattening, are put up in October and fed with steamed potatoes and apples for about 6 weeks, then fed with cooked corn or barley for about four weeks, on which they fatten rapidly. My spring pigs are butchered at 8 months old, weighing about 250; last year, by extra pains, they went over three hundred, when dressed; some at eighteen months, weighing from three to four hundred.

I have made no experiments with root crops, as to their relative value when compared with corn; but usually feed two or three hundred bushels potatoes and carrots to my milch cows, working horses and oxen, and find them nearly equal to oats.

Fences, Buildings, &c.—For explanation please refer to the diagrams annexed.

No. 1 is front yard, elevated above the level of the road by means of stone wall, backed up by earth, and crowned with a good picket fence; X portico and stone steps. No. 2, dwelling house, one and a-half stories high, consisting of drawing-room, parlor, hall, dining-room, bed-room, kitchen, well-room, cheese-room, pantry, sink-room, wood-house, &c., on the first floor, and upper story consisting of parlor chamber, lodging rooms, clothes presses, &c. Also a cellar, 30 by 38, consisting of bake room, fruit cellar, vegetable cellar, store room and larder. No. 3, smoke and ash house with stone bottom. No. 4, bee house. No. 5, water closet. No. 6, carriage house and horse-barn. No. 7, corn barn. No. 8, hog and pig house, consisting of passage way, arch, water reservoir, brought by means of lead pipes, and 4 apartments, with stone floor as a basement, and a principal story above consisting of work shop and tool room, 12 by 30 feet; also steam room, 12 by 18; also, garret above for lumber, &c. No. 9, tunnel under ground, communicating from hog house to orchard. No. 10, open shed and manure basin. No. 11, stable for young cattle. No. 12, passage from hog house to young orchard. No. 13, garden, (vegetable) well enclosed with a good pale fence. No. 14, calf yard. No. 15, peach and pear orchard. Nos. 16 and 16, reservoirs of water, brought from main cement pipes, through small leaden ones. This cement pipe is made of water lime and sand, and laid 2½ feet under ground, conducting a stream of water 1½ inches in diameter, some 60 rods from a main reservoir created by under draining, which affords an abundance of living water at all seasons of the year, for all house and barn purposes. No. 17, barn yard in which is a large basin some 2 feet deep, which receives a principal part of the wash of the yard, and retains all the fine particles of manure. No. 18, horse barn, with hay loft and manure cellar, 18 by 25. No. 19, store room and apple grinder, with hay loft, and sheep-fold basement. No. 20, cider press with loft for storage. No. 21, sheep yard. No. 22, sheep and poultry yard, enclosed with tight board fence, with pickets and wires, &c. No. 23, open shed with feeding trough. No. 24, stable for oxen. No. W, machine house, containing horse power, which drives threshing machine, wood saw, straw cutter, &c. No. 25, circular saw, for sawing wood, &c. No, 26, horse power, (railroad patent) hay loft over all. No. 27, stable for cattle, with loft above for hay or grain. Nos. 28, 29, 30 and 31, threshing floor, bay for grain or hay, passage way, and stable for cattle, with a good loft over all for hay, grain or fodder. No. 32, poultry house. No. 33, orchard. No. 34, sheep shed.

Fences.—My fence is mostly made of good substantial chestnut rails, after the usual form of worm fence, with the corners well locked. I have 138 rods of board fence on cedar posts, 4½ feet high; also 25 rods pale fence. The board and pale fence cost 75 cents per rod. There is 1,746 rods of the rail fence, and 31,428 rails, which were all split from timber growing upon the farm. Cost $5 per thousand for cutting and splitting; the same for drawing and laying up, which will be 18 cents per rod. The total length of these fences is 5 miles and 309 rods. So much fencing on the farm is in consequence of a road running on two sides of it, and another across the south end. I also have a lane 3 rods wide extending from my barns through the centre of the farm to the road south, where I have a tunnel under the road, that my stock can pass to and from the pasture on the opposite side. The fields are principally arranged to enter from this lane. The condition of my fences is good, and all of durable timber—made 7 rails high, equaling 5½ feet.

Farm Accounts.—All my crops are accurately weighed or measured, excepting the hay and corn fodder. Correct accounts are kept of the loads of hay and bundles of corn fodder, and occasionally a load of each are weighed, that I may ascertain nearly the amount of each raised. It is all set down in my farm book, and enables me to ascertain the amount of stock that can be wintered, besides other benefits accruing from this accuracy. I keep tackle and large steelyard for the purpose of weighing hay or other feed for different animals, for my own convenience and satisfaction, to ascertain the expense of keeping, &c. My accounts are all daily registered with such minuteness as enables me to know the expense or income of all my transactions. Debt and credit is kept with each field, with the same precision as with individuals.

I keep accurate and regular farm accounts, and the annual expense of improving, and the income from it, is kept with such exactness and precision as enables me to strike an accurate balance of the debt and credit at the close of each year. A memorandum is kept through the day, of the kind, cost and amount of labor in each field, and at night all is minutely registered in my farm book. I have a diagram of the farm, on which all the fields are numbered, and regular debt and credit is kept with each field. Also an inventory is taken of all my stock, tools, debts, dues, &c., at the close of each year, which enables me to know my exact valuation; also to know my progress from year to year. The practice of keeping our farm accounts accurately would most certainly conduce to close observation, make us more careful in all our farming operations, and in the end make us more thorough, systematic and profitable farmers. The expense of labor on my farm the present year, up to the first of December, amounts to $517.21, but about $300 of this has been expended in cutting wood and burning coal, from such of my timber as was not valuable for other uses. I found ready market for it in our village, and always returned with a load of manure, when it was to be obtained. This coal and wood to the present time amounts to $954, a sum sufficient to pay all the expenses of the farm, (including the cutting of wood and burning coal,) and leaves an overplus of $436.79. I will here state the cost per bushel of raising some of my crops: wheat, 38 cents per bushel; barley, 28 cents; oats, 12¼ cents; beans, 36¼ cents; timothy seed, 93¼ cents; potatoes, 8¾ cents; hay, about 8s. per acre. My work is principally performed by persons hired by the month; pay from $8 to $12 per month. Have three small dwelling houses that I usually rent for about $90 a year to some of my help.

New-York State Agricultural Society.

Premiums awarded at Syracuse.

(Continued from page 307.)

Honey—Best 20 lbs., to Aaron Goodwin, Brownville, $5.

Bee Hives—Dugdall's patent Moth-proof, Thomas M'Clintock, Diploma.

Reeled Silk—1. (name not ascertained) Diploma and $5—2. N. M. Coburn, Stockbridge, Trans.

Sewing Silk—1. Jeffrey Hutchinson, Riverhead, $8—2. Parmelia Staats, Buffalo, $5—3. N. M. Coburn, Trans.

Cocoons—But one lot—no premium.

Linen—10 yards—1. Mrs. J. Harrold, Pittstown, $8—2. Mrs. C. Avery, Perryville, $6—3. Mrs. Nelson Van Ness, $4.

Diaper—10 yards—1. Horace Clark, Skaneateles, $6—2. Mrs. J. T. Van Namee, Pittstown, $4—3. Joshua Beard, Milo, $2.

Tow Cloth—1. Mrs. Catharine M'Knight, Syracuse, $5—2. to do., Trans.

Cotton Stockings, Knit—1. Mrs. Wm. Wright, Vernon, $2—2. Mrs. H. Wier, Pittstown, Trans.

Linen Stockings, Knit—1. Mrs. Geo. D. Loomis, Westmoreland, $2—2. Mrs. W. Baker, Lima, Trans.

Sewing Thread, linen—1. Mrs. C. M'Knight, $2—2. Mrs. Levi T. Marshall, Vernon, Trans.

Discretionary—Four cotton stand cloths, Han. Earl, Granby,	$2
One linen seamless bag, Mrs. Wier, Pittstown,	$1
Six grain bags, Aaron Goodwin, Brownville,	1
One skein of yarn, A. Howland, Stillwater,	1
Ten yards linen cheese strainer, S. W. Abbott, Kirkland,	2
Bunch comforter yarn, and zephyr yarn, and cruels, Mrs. C. M'Knight,	1
Skein stocking yarn, Mrs. D. S. Severance, Truxton,	1
2 skeins woolen yarn, J. C. Collins, West Turin,	1
Very superior tent for show grounds, E. C. Williams, Rochester,	Dip.

MANUFACTURES.

Case blue and black broad cloths, Utica Globe Mills,	Dip.
Three pieces black broadcloths, D. Kellogg, Skaneateles,	Diploma and medal.
One box and two bales sheeting, Jones' Cotton Mills, Seth C. Jones. Rochester,	Dip.
Mousselin de Laines, J. T. Van Namee, Pittstown,	Dip.
Twenty-eight woolen shawls, very fine, D. Kellogg,	Sil. Medal.
Four pieces fancy cassimeres, D. Kellogg,	Trans.
Three pieces three ply carpets, very good, Schenectady Steam Mills,	Dip.

NEEDLE, SHELL AND WAX WORK.

Best ornamental needle work, Miss Mary M. Chase, Chatham,	Dip. and $3
Best ottoman cover, Mrs. T. M. Wood, Syracuse,	Dip. and $3
Best group of flowers, Miss M. A. Van Voorhees, Lyons,	Dip. and $3
Best variety of worsted work, Mrs. R. Howitt, Genesee,	Dip. and $3
Best fancy chair work, with needle, two worked worsted chairs, Mrs. H. S. Lansing, Albany,	Dip. and $3
Fancy chair work, Mrs. C. M. Barnett, Syracuse,	Dip. and $3
Best fancy arm chair, worked back and seat, 2d premium, Jane McElroy, Albany,	Dip. and $2
Best worked handkerchief, Mrs. H. R. Smith, Fredonia,	Dip. and $3
Best woolen shawl, Luman Shepherd, Skaneateles,	Dip. and $3
2nd do., Mrs. Aaron Goodwin, Brownville,	Dip. and $2
Best worked quilt, Miss C. Hammond, Skaneateles,	Dip. and $3
Best white quilt, John T. Clarke, Onondaga,	Dip. and $3
Best port folio, worked, Miss E. Cheeseboro, Syracuse,	Dip. and $3
Best silk bonnet, Mrs. W. A. Cook, Syracuse,	Dip. and $3
Best straw bonnet, Miss Mary Maybee, Syracuse,	Dip. and $3
Best lace capes, Miss Emeline F. Wagner, Fort Plain,	Dip. and $3
Best lamp stand mat, Mrs. S. Breese, Skaneateles,	Dip. and $3
2nd do., Mrs. A. Howland, Stillwater,	Dip. and $2
Best shell work basket, Mrs. Wm. Baker, Livonia,	Dip. and $2
Best wax flowers, Mrs. M. A. Van Voorhees, Lyons,	Dip. and $3
2nd do., Miss Sarah C. Teller, Syracuse,	Dip. and $2

Discretionary.—Nine pieces needle work, Miss Pardee, Oswego,	Dip. and $3
Fancy chair work, Mrs. A. Elmendorf, Palmyra,	Diploma.
Needlework, lady's skirt, Miss M. Wynkoop, Syracuse,	Diploma.
Specimen of embroidery, port folio and picture, Miss Mary A. Fleming, Manlius,	Dip. and $3
Piece needlework, imitation embroidery, Mrs. D. O. Kellogg, Troy,	Diploma.
Case of needlework, linen, Mrs. A. G. Dayan, Turin,	Diploma.
Black lace veil, Mrs. A. Howland, Stillwater,	Trans.
Pair of ottomans, Miss Mary Seymour, Syracuse,	Diploma.
Two ottoman covers, Mrs. John McCarthy, Syracuse,	Diploma.
Table spread and silk quilt, Mrs. O. S. Gillett, Fayetteville,	Dip. and $3
Embroidery, Miss Sarah M. Burns, Canajoharie,	Diploma.
Worsted needlework, Miss E. Terry, Mt. Morris,	do
Ornamental needlework, Miss E. Dorr, Albany,	do
Embroidered rocking chair, Mrs. A. Pruyne, Oswego,	do
Case of fancy and domestic articles, Mrs. B. R. Voorhees, Amsterdam,	Dip. and $3
Cambric handkerchiefs, Miss A. M. Hill, Canton,	Diploma.
Bed quilt, Mrs Royal Wilcox, Watertown,	do
Worked curtains, Miss Emily P. Weed, Albany,	do
Bed spread, Mrs. Aaron Goodwin, Brownville,	do
Counterpane, A. Bartlett, Syracuse,	do
Worked quilt, Mrs. M. Gildersleeve, Albany, (84 years of age,)	Dip. and $2
White cotton bed quilt, Mrs. D. S. Severance, Truxton,	Diploma.
Table spread, Mrs. J. W. Hickox, Syracuse,	do
Calico quilt, Mrs. Jane M. Wright, Geneva,	do
Knit sash and shawl, Mrs. A. Goodwin, Brownville,	do
Cambric quilt, very fine, Mrs. Walker, Georgia,	do
Knit bed spread, Mrs. D. R. Holmes, Richland,	do
Worsted needlework, Mrs. E. Allen, Newark,	do
Portfolio worked, Miss Mary Murdock, Clarkson,	do
Net lace cape, Miss Elizabeth Cook, Fort Plain,	do
Moss lamp mat, Mrs. A. Howland, Stillwater,	Trans.
Dress coat, R. Titsworth, Syracuse,	Diploma.
Pair divans, Mrs. J. L. Greenman, Syracuse,	Diploma.
Knitted bed spread, coat, tidy, and two bead baskets, Miss Pixton, blind girl, Westmoreland,	Dip. and $3
Three pairs slippers, purse, &c., Miss A. J. Kidder, Syracuse,	Diploma.
Case of flowers, Mrs. T. M. Wood, Syracuse,	do
Confectionary work, Wm. Ragg, Syracuse,	do
Needlework, Mrs. C. Huntley, Syracuse,	do
Lace veil, Miss S. Buel, Waterville,	$1
Fancy piece of embroidery, Miss M. Seymour, Syracuse,	Diploma.
Fire screen, Miss Sarah B. Gillet, Syracuse,	do
Chair back of needlework, Miss Mary Gillet, Syracuse,	do
Lot fine shirts, K. V. R. Lansingh, Albany,	do
Worked bird of Paradise, Mrs. A. L. Green, Utica,	do
Gipsey telling fortune, needlework, very fine, Mrs. N. Clute, Louisville, Ky.,	do
Two small cases wax flowers, S. B. Gray, Syracuse,	do
Two caps and one head dress, Mrs. W. A. Cook, Syracuse,	do
Three caps, Miss Maybee, Syracuse,	Trans.
Pair worked worsted suspenders, Miss Amelia Wallace, Syracuse,	Diploma.
Six pieces thread lace, Misses Sarah Ann and Lavina Beverstock, Ogdensburgh,	do
Gentlemen's dressing-gown, Mrs. J. S. Davis, Syracuse,	do
Coat, vest and pantaloons, Thomas Cooke, jr., Albany,	Dip. and $3
Four crotchet collars, N. M. Beacham, jr., Skaneateles,	Diploma.
Horn of plenty, worsted work, Mrs. A. W. Bruce, Sullivan,	Dip. and Trans.
Lace manufactured by Sarah Ann Alderman,	Dip. and $3
Embroidered sofa pillow, Mrs. A. Pruyne, Oswego,	Trans.

FLOWERS.

Professional List.—Greatest variety, James Wilson, $5.

Dahlias—Greatest variety, Jas. Wilson, $5—Best 24, Wm. Newcomb, Pittstown, $3.

Roses—Greatest variety, Elwanger & Barry, Rochester, $5—Best 24, Jas. Wilson, $3.

Phloxes—Best ten varieties, Elwanger & Barry, $3—Best Seedling, Jas. Wilson, $2.

Verbenas—Greatest variety, Jas. Wilson, $3—Best 12, Elwanger & Barry, $2—Best Seedling, Jas. Wilson, $2.

Asters—Best collection, Wm. Newcomb, $3.

Pansies—Best collection, Elwanger & Barry, $3.

Amateur List.—Greatest variety, Mrs. E. T. T. Martin, Willow Brook, Silver Medal.

Dahlias—Greatest variety, M. Wells, Jamaica, Sil. Medal—Best 12, Mrs. W. Newcomb, $3

Roses—Greatest variety, Mrs. E. B. Morgan, Aurora, Sil. Medal—Best 12, Mrs. David Thomas, Aurora, $3.

Phloxes—Best six, Mrs. E. T. T. Martin, $3.

Verbenas—Greatest variety, Mrs. E. T. T. Martin, $3—Best Seedling, Mrs. Prof. Jackson, Schenectady, $2—Best 12, Miss L. G. Whitney, Rochester, $2.

Asters—Best collection, Alphonso Le Coteleux, Buffalo, $3.

Pansies—Greatest variety, Dr. A. Thompson, Aurora, $3—Best 12, Dr. H. Wendell, Albany, $2.

General List, open to all competitors.—Best collection greenhouse plants, Elwanger & Barry, Silver Medal.

Best floral design—1. Mrs. C. B. Sedgwick, Syracuse, Sil. Medal—2. Mrs. W. Newcomb, $3.

Best floral ornament—1. Mrs. Prof. Jackson, Sil. Medal—2. Mrs. E. T. T. Martin, $3.

Best hand bouquet, flat—1. James Wilson, $3—2. Dr. Herman Wendell, $2.

Best hand bouquet, round—1. Jas. Wilson, $3—2. Mrs. White, $2.

Best basket bouquet, with handle, Dr. A. Thompson, $3.

For the most beautifully arranged basket of flowers, Dr. Herman Wendell, Diploma.

To Aurora Horticultural Society, for the best exhibition, Hovey's Col. Fruits.

FRUIT.

Apples—Greatest and best variety—1. Benj. Hodge, Buffalo, Diploma and Hovey's Colored Fruits—2. A. Bryant, Buffalo, $5.

Best 12 varieties table apples—1. B. Hodge, $5—2. A. Bryant, Buffalo, Trans. and $2.

Best 6 winter varieties—1. B. Hodge, $3—2. A. Bryant, Trans. and $2.

Pears—Greatest number of varieties of good pears—1. J. Morse, Cayuga Bridge, Dip. and Hovey's Colored Fruits—2. B. Hodge, $5—3. J. W. P. Allen, Oswego, Trans.

Best collection of first rate autumn pears—1. John Morse, Dip. and $5—2. J. W. P. Allen, Trans. and $2.

Best collection of newly introduced pears, Dr. Herman Wendell, Dip. and Hovey's Col'd Fruits.

Peaches—Best 12 varieties—1. John Morse, Dip. and $5—2. James M. Whitney, Rochester, $2.

Best 6 varieties, Elwanger & Barry, $3—2. H. G. Dickinson, Lyons, $2.

Best 12 peaches, B. R. Norton, Syracuse, (Crawford's Early,) $2—2. Abram Vail, Waterloo, Trans.

Plums—Best collection—1. 31 varieties, Dr. Herman Wendell, Dip. and $5—2. 50 varieties, Isaac Denniston, Albany, $3.

Best 6 varieties, Elwanger & Barry, $3—2. C. S. Wilson, Utica, $2

Best 12 plums,—1. R. Woolworth, Syracuse, $2—2. H. G. Dickinson, Trans.

Nectarines—Best and greatest number, J. C. Hastings, Clinton, $3.

Grapes—Best and most extensive variety native grapes, grown in open air—1. John C. Hastings, $5—2. D. Ayres, Amsterdam, $2.

Best 3 varieties grown under glass—1. W. R. Coppock, Buffalo, $5—2. John C. Hastings, $2.

Best dish of native grapes, (Isabella) Rufus Cossett, Trans.

Discretionary—Best grown and matured specimens, (Muscat and Black Hamburg,) — ——, Downing and Am. Fruit Culturist.

3 specimens of grapes, Joseph E. Bloomfield, Mexico, Am. Fruit Culturist.—Two bottles of white and red champagne wine, B. Poppe, Syracuse, Downing.—Specimen of port wine from native grapes Chas. A. Peabody, Columbus, Georgia, Diploma.

Melons—Best specimens water melons, H. N. Langworthy, Rochester, $3—Best specimens musk melons, to do., $3.

Quinces—Best 12 quinces, Elwanger & Barry, $3—2. Lewis Eaton, Buffalo, $2.

FOREIGN FRUITS.

Apples—Best exhibition—1. E. Harkness, Peoria, Illinois, Diploma and Trans.—2. James Dougall, Amherstburgh, C. W., American Fruit Culturist.

Pears—Best exhibition, F. R. Elliott, Cleveland, O., Dip. & Trans. —2. James Dougall, Amherstburgh, Am. Fruit Culturist.

Grapes—Best exhibition, Jas. Dougall, Dip. and Trans.

Discretionary—Dr. J. A. Kennicutt, Elm Grove, Illinois, for a fine exhibition of western apples, Downing's Fruits.

Mr. Overman, Canton, Illinois, for a fine display of apples, Downing's Fruits. Also, to the same, for an exhibition of pears, American Fruit Culturist.

F. R. Elliott, Cleveland, Ohio, fine display of new western apples, Am. Fruit Culturist.

J. Gallup, of Cleveland, Ohio, for fine exhibition of fruit, Downing's Fruits.

J. C. Holmes, Detroit, fine exhibition of apples, Fruit Culturist.

VEGETABLES.

Best 12 carrots, C. F. Crossman, Rochester,	$3
Best 12 table beets, do do	$3
Best 12 onions, N. Culver, Arcadia,	$3
Best 12 tomatoes, C. F. Crossman,	$3
Best 3 heads of cabbage, N. Culver,	$3
Best 12 sweet potatoes, do	$3
Best 2 egg plants, C. F. Crossman,	$3
Best half-peck Lima beans, Jason W. Seward, Rochester,	$3
Best bunch double parsley, C. F. Crossman,	$3
Best 3 squashes, C. F. Crossman,	$3
Largest pumpkin, H. N. Langworthy, Rochester,	$3
Best 12 ears of seed corn, N. Culver,	$3
Best seedling potato, H. Morrison. Montgomery,	$3
Best and greatest variety of vegetables raised by exhibitor, C. F. Crossman,	$5
Discretionary—Half peck Lima beans, J. P. Fogg, Rochester,	$3
Three squashes, Lewis Eaton, Buffalo,	$2
do do C. F. Crossman,	$2
Large pumpkin, N. Culver,	$2
Sweet corn, C. F. Crossman,	$2
Table potatoes, Richard Cheney, Syracuse,	$2
Seedling potatoes, Luman Shepherd, Skaneateles,	$3

PAINTINGS, DRAWINGS AND DAGUERREOTYPES.

Animal painting in oil, by a young artist, B. F. Carpenter, Homer,	Diploma.
Foreign artist, painting of a distinguished Short horn bull, by Mr. Henry Strafford, London,	Diploma.
Pencillings, (The Playmates,) Miss Helen A. St. John, (13 years old,) Fabius,	do
Two Monocromatic paintings, and 2 pieces pencil drawings, by M. A. Hill, Canton,	Commended.
Oil and water color paintings.—Two large monocromatic paintings, Mrs. J. S. Greenman, Syracuse,	Diploma.
Three paintings in water colors on Ivory, Mrs. Anna S. Smith, Syracuse,	do
Drawings in India ink for patent office, H. Searl, Rochester,	do
Specimens of penmanship, J. T. Carr, Ithaca,	do

Daguerreotypes.—The committee divide the award for the best daguerreotypes between D. E. Gavit, Albany, and Evans & Powelson, Buffalo, and a diploma is awarded to each. Mr. McDonnell, Buffalo, presented one picture of rare excellence.

Case cameo likenesses, W. C. Mayhew, Buffalo, Diploma.

STOVES.

Best cooking stove for wood fire, Mathew Murphy, Syracuse, Silver Medal. Second best, "Phoenix Air Tight;" Seymour & Wood, Utica, $5.

Best cooking stove for coal, Forbes, Wright & Co., Syracuse, Silver Medal. Second best, Wm. Wheeler, Troy, $5.

Best parlor stove, "Chandelier," B. P. Learned, Albany, Silver Medal. Second best, Bailey, Wheeler & Co., Utica, $5.

Discretionary.—Flat iron heaters, Charles H. Tozer, Syracuse, Trans.

Self regulator for stoves, Foote & Owen, Seneca Falls, Trans.

Best lot of hollow ware, W. J. Noyes, Troy, Trans.

Morse's (Fire-Grate,) Air Distributor, J. A. Campbell, Buffalo, Trans.

Brass coffee pot, R. H. Kirk, Newport, Diploma.

MISCELLANEOUS.

From the long list of articles noticed by the committee, we select the following as being of most interest to the farmer:

For a pyramid of paper flowers, (elegantly wrought,) Miss Adeline Hayden, Albany, Medal.

Smith's hydraulic ram, with a new mode of regulating the discharge valve, Alpheus B. Smith, Meredith, Silver Medal.

Six iron cistern pumps, one well pump, and one force pump. These have a revolving motion to the spouts, Downs, Mynders & Co., Seneca Falls, Diploma.

A rotary fire engine pump of beautiful arrangement and manufacture, A. W. Cary, Brockport, Silver Medal.

Draining tiles, pipes and collars, manufactured by B. F. Whartenby, Seneca county, in a Tile Machine imported by John Delafield, Esq., of Seneca county, and exhibited by Mr. Delafield, Diploma and Silver Medal.

Five iron pumps, excellent articles, J. P. Cowing, Seneca Falls, Trans.

Dairy Steamer, a well made article, B. F. Greene, Little Falls, Trans.

Portable cider mill and press, Nathan Chapin, Syracuse, Diploma and Transactions.

Rotary steam engine, "Pease's patent," Geo. P. Strong, Rochester, Silver Medal.

Houghton's Bell Telegraph, for public houses, S. A. Hudson Syracuse, Diploma.

Sarcophagus or metallic burying cases, Fitch & Raymer, New-York, Silver Medal.

Machine for making cast iron water and gas pipe, by the centrifugal force of motion, &c., and a cast iron pipe, Thos. I. Lovegrove, Baltimore, Md., Silver Medal.

A finely finished bell, weighing 257 lbs., keyed on letter A, with the following inscription, "Presented to General Zachary Taylor, President of the United States, by Andrew Meneely, founder, West Troy, N. Y., 1849," Andrew Meneely, Silver Medal.

Sets of tools, chisels, augers, hammers, hay knives, &c., a beautiful display, D. R. Barton, Rochester, Silver Medal.

Machine for drilling rocks, M. P. Coons, Lansingburgh, Diploma and Medal.

156 Different patterns of pocket knives and cutlery, very fine, Waterville Manufacturing Company, Waterbury, Ct., Diploma and Silver Medal.

Washing and wringing machine, G. Goodell, Syracuse, Diploma.

Kit of coopers' tools, W. W. Bryan, Rochester, Silver Medal.

GRAIN, FLOUR AND WOOL.

Best sample of winter wheat, one barrel, (white Blue-stem,) Timothy Judson, Portland, $5. Second, H. Murray, Montgomery, $3.

Best sample oats, one barrel, E. R. Dix, Vernon, $5.

Best sample barley, one barrel, E. R. Dix, $5.

Best barrel of flour, Oviat and Stone, Rochester, Diploma. Second, Wm. W. Hanford, Honeoye Falls, Trans.

Best fleece fine wool, J. G. Strean, Washinging, Pa., Diploma.

John Holbert, Chemung, two butter firkins, Diploma and Trans.

☞ It is not improbable that inaccuracies have occurred in the names of persons in the foregoing list, which has been copied from entries in the Secretary's books. It is requested that all errors discovered be reported to the Secretary of the Society without delay, that they may be corrected before the final publication of the awards in the Transactions of the Society.

All information in relation to premiums may be obtained from the Secretary, who will give prompt attention to all inquiries.

B. P. JOHNSON, *Secretary*

Twin Foals.—A pair of twin colts, three months old, well-shaped and of good size, were exhibited at the late State Fair, by **Peter G. Houghtaling**, of De Witt, Onondaga county.

The Veterinary Department.

Influenza in Horses.

Eds. Cultivator—The disease I am about to consider under the above appellation, is better known among horsemen by that of "distemper." From the real nature and proper treatment of this affection not being properly understood, the number of horses which annually fall a sacrifice to its influence is almost beyond conception.

The hcaracter of this, like many other diseases, varies according to the season of the year, as well as the state and condition in which the animal is placed at the time of being attacked. It most frequently occurs when the weather is changeable, particularly in the spring and autumn months; and from being prevalent in some seasons more than in others, it has in consequence been considered to be a contagious disease; but the most probable cause appears to me to be sudden atmospheric changes, as from dry to wet, and from hot to cold. In its simplest or least complicated forms, it bears a resemblance to common cold (catarrh;) the mucous membrane of the "air passages," is its primary and principal seat, generally commencing in the chambers of the nose, and upper part of the throat, extending in some instances down the windpipe, and its ramifications the bronchial tubes; or it may go still further, and ultimately involve the whole substance of the lungs.

In some subjects its attack is very slight. The horse is first observed to be languid and dull; he refuses part or the whole of his feed of grain—occasionally coughs; he is incapable of undergoing any considerable exertion; signs of soreness of his throat are soon observed; the food cannot be swallowed as usual; the slightest compression of the throat makes the animal flinch and sets him coughing; the mouth is dry, and the membranes of the eye and nose are somewhat unusually red. In some severe cases, the soreness of the throat causes the animal to carry his neck stiff, with his nose projected; the food and water, when attempted to be swallowed, is forced back again through the nostrils; the glands about the throat are more or less swollen; the breathing is short, difficult and painful, and attended with a peculiar hoarse sound in the throat. In other instances the membrane lining the lungs, (bronchial,) receives the principal brunt of the disease; the horse now stands in his stall dull and listless, in one particular place; the breathing is short and quick, (but not deeply drawn;) the pulse is accelerated and weak; skin and legs rather warm than cold; membrane of the eye exhibits rather a *yellowish-red* cast; the discharge from the nose is also of a bilious hue.

It is not my intention in this article to attempt a description of all the characters that this disease occasionally assumes, but briefly to notice its most prominent features.

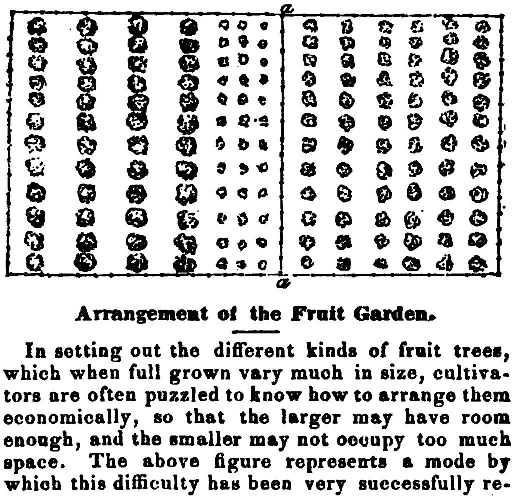
In determining the treatment of "influenza," regard must be paid to the seat and extent of the derangement constituting it, always bearing in mind that the tendency and certain issue of this disease is *debility*. Hence, in the generality of cases, the most cautious treatment is necessary; for if active measures are resorted to, such as large and repeated blood-letting, rowels, strong physic, &c., the horse becomes debilitated, his extremities (legs) enlarged and dropsical, and he either dies of "yellow water," (dropsy,) or remains for a long time in a low and weak state.

At the commencement of the disease, it is necessary to keep the animal in a large stall, without exercise; and in the summer let the temperature be kept as cool as possible, cautiously avoiding a direct current of air. The diet may consist of scalded bran and hay, with tepid water, in which a few drachms of nitrate of potash (nitre) is dissolved, always within his reach; or it may be sweetened with honey or molasses, providing the patient likes it. The horse should be well wisped or brushed, and clothed warmly, particularly when he feels cold and shivers. If the bowels are constipated, two ounces of cream of tartar may be given in the drink every morning, and should the excretions appear pent up, the hand oiled is to be introduced and the rectum emptied, and afterwards a clyster given composed of gruel, linseed tea, or a decoction of slippery elm.

When horses are of great value, I have suspended under their throat bags containing bran and linseed meal poultices, and renew them every two hours, keeping the animal at the same time comfortably clothed. Or the throat may be well fomented with water as hot as a man can bear his hand immersed in, and steaming his nose with the vapor arising from it; after which the glands about the upper part of the windpipe should be well rubbed with the following liniment: alcohol one pint, camphor one ounce, soft soap four ounces, spirit of hartshorn, (water of ammonia,) two ounces. Simple means, such as these, will, in the generality of cases, be followed by the happiest result; a complete restoration to health. Arthur S. Copeman. *Utica.*

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.



Arrangement of the Fruit Garden.

In setting out the different kinds of fruit trees, which when full grown vary much in size, cultivators are often puzzled to know how to arrange them economically, so that the larger may have room enough, and the smaller may not occupy too much space. The above figure represents a mode by which this difficulty has been very successfully removed, by planting the larger sorts in wider rows, and the smaller more nearly together. By this arrangement, the trees stand in rows both ways, and thus no hindrance is imposed to their easy cultivation by horses.

The Apricots, Plums, Nectarines, and other fruits liable to injury by the curculio, among which may also be included some of the earlier and more thin-skinned peaches and cherries, should be planted separately at one end of the fruit garden, and as soon as they commence bearing, a temporary low hurdle fence, *a a*, run across to separate them from the rest for the confinement of pigs, geese, &c. These animals, on the whole, are the most cheap and effectual remedy for the curculio, serving partly to frighten away the insects, and to destroy those which drop in the stung fruit. Other remedies may be added where necessary.

Those who are about commencing such a garden, cannot well take too much pains in the previous preparation of the ground. It should be very deeply plowed and very thoroughly enriched. If it is subsoiled first, it may be easily trench-plowed afterwards, the latter serving more effectually to intermix the manure to a full depth.

To cultivate the ground, and avoid barking the trees, fasten one horse before the other, using a very short whiffle-tree next the plow, and let a boy ride the forward horse. This arrangment will allow the plow to pass as near the roots as may be desired.

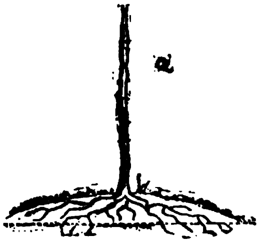
Autumn Work.

Every cultivator of fruit, who expects to keep up a supply, must occasionally renew his plantation. Of some kinds, and more especially peaches, it will often be found both easier and cheaper, to plant young trees, than to resuscitate old ones.

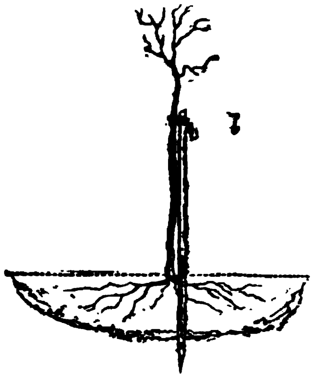
Hardy kinds of fruit trees, as the apple, if set in autumn, will get an earlier start the next season, than by removal in spring. But tender sorts, as the peach and apricot, are more safely transplanted after the danger of winter frost has passed. This danger, however, will scarcely exist if good soil is chosen, and proper care taken.

Low and wet soils, or ground which is clayey and holds water like a tub, or such soils as are liable to become flooded before freezing up, are dangerous for tender trees, newly set out by the usual mode. Where it becomes necessary from the force of circumstances to plant on such lands, the holes must be well drained, which may be effected by previously running a deep furrow along the line of the holes, and afterwards placing a small quantity of brush in this furrow before filling it, along which the water may soak away.

But on low and moist soils, it has been found decidedly advantageous to set the trees without digging any holes, as represented in the annexed figure. (*a*.) The tree is set directly upon the rich mellow surface, (indicated by the dotted line,) and the earth thrown upon the roots so as thoroughly to cover them, and form a very broad and flat mound of earth. This not only gives the roots a deeper soil, but it is nearly impossible for the water to accumulate among them. By throwing the furrows occasionally towards the row, the rising surface will be maintained, and a furrow left between for drainage.



Trees of moderate size, with good broad roots, with one years' shoots properly shortened back, say about one-half or two-thirds of each, will not often need staking; very rarely, if a mound of earth is banked up a foot high round the trunk, till the tree is in leaf. But with large heads and badly cut roots, staking cannot be easily avoided. Where this is the case, a very convenient way is to drive the stake into the bottom of the hole before the earth is thrown in, as in the accompanying figure, (*b*) and subsequently binding the tree with straw to the stake, so as to preclude the possibility of chafing.



There are several other operations which the fruit cultivator must not forget before the winter sets in. Tender trees may be materially protected in some instances by a circle of manure about their stems, the soakings of which will only enrich the soil, till it is removed when warm weather approaches. But one of the best possible means of protection is a *dry soil and subsoil* for all such trees, without which all artificial modes of covering will be of but doubtful efficacy.

Young trees in localities unfavorable to rich cultivation, and which may not be sufficiently vigorous in growth, may be given new vigor by covering the soil several feet around them with yard manure, and sprinkling this with half an inch of ashes, spading the whole under early in spring.

A fresh mound of earth should be banked up round the stems of such trees as may be in the least danger of injury from mice, which will result in their perfect exclusion.

A top-dressing of manure on strawberry beds will protect them from the winter, and enrich, by soaking, the soil near the surface.

Tender raspberries, &c., are very neatly and effectually protected by a covering of evergreen boughs, of moderate thickness, shutting out the sun's rays from the frozen stems being very essential.

The Everbearing Raspberry.

This celebrated sort has excited many inquiries, and has perhaps been overpraised. The common American Black raspberry or "Black-cap," is a valuable kind and especially adapted to some of the lighter soils, where the Antwerps succeed but imperfectly. The superiority of the Everbearing over this, is pointed out in the following extract of a letter from a very experienced cultivator:—"It is only a *variety* of our wild black raspberry, which, *in very rich ground*, sends up suckers through summer and autumn, flowering and fruiting the same season,—exactly as the last year's *stems* produce bearing *shoots* on the common kind. The quantity of fruit, however, must be very limited: and coming at a time when our finest kinds are in season, I consider it of little value. Other persons, however, may think differently. The everbearing Alpine strawberry, I think, is precisely a parallel case, for I presume this strawberry is not a new species."

Office of Leaves Illustrated.—During the last hot, dry weather, the leaves of one rose bush dried up, and I was apprehensive I should lose the plant.—the only one of the kind I had. The thought struck me that each leaf was pumping out the moisture, and therefore I cut off every one. The result was, the twigs ceased to wither, and the buds are now swelling for a new start. Over deep, loose subsoils, such disasters may rarely occur. Fearing it might not live, however, I took the additional precaution to set buds from it. David Thomas. 8 mo. 12, 1849.

American Congress of Fruit Growers.

Pursuant to adjournment, the members of the American congress of Fruit Growers, together with additional delegates from Societies not represented last year, met at Castle Garden in New-York on the 2nd inst. There was a large number of gentlemen present from various parts of the United States, and also, very fine collections of Fruits, full lists of which will appear in the published proceedings, which are to be issued in pamphlet form. Marshall P. Wilder, the President of the Congress, took the chair, as did also the Vice Presidents and Secretaries, their appropriate stations. A resolution was passed inviting the President and Vice Presidents of the North Am. Pom. Convention who were present, to take seats on the rostrum, which they accordingly did. At an early hour of the first days' session, Mr. A. J. Downing addressed the Congress, urging upon its members the propriety and necessity of harmony among pomologists, and congratulating those present upon the prospect of such harmony, consequent upon the action of the North American Pomological convention, which recently terminated its session at Syracuse, by which Convention a committee of conference had been appointed, to confer with this Congress, upon matters relating to merging the two associations into one organization for future operations, which committee he understood were present. He closed his remarks by moving a resolution that the President of the Congress appoint a committee to confer with the committee of the other association, which was unanimously adopted. The President named Mr. Downing, Dr. W. D. Brinckle, Mr. McIntosh, Professor Olmsted, and Mr. Walker; subsequently the President was added to the committee on a suggestion of Dr. Wendell that the President of the other organization had been added to its committee. After Mr. Downing had closed his remarks, and the committee had been appointed, Dr. Herman Wendell rose, and remarked that, as chairman of the committee of the North American Pomological Convention, who had been appointed to confer with this Congress, he begged leave to coincide fully in all the remarks of Mr. Downing in relation to the necessity of harmony and kind feeling among Pomologists; and he could not but hope, from the character of the committee which had been chosen, to confer with the one of which he was a member, that such would be the effect of the Conference of the committees.

Dr. Wendell added that the committee who were appointed, and who were now present, to confer with the committee just appointed by this Congress, were Dr. J. A. Kennicott, Prof. J. J. Mapes, F. R. Elliott, Col. Benjamin Hodge, Chas. Downing and himself.

The convention then adjourned, in order that the committees might confer together. At its re-assemblage, Col. Wilder remarked that the joint committees had met and chosen him its chairman, and that they had unanimously instructed him to report, as the result of their deliberations:—

1st. That the two associations shall hereafter be merged into one organization, under the title of the American Pomological Congress.

2nd. That the next meeting under the above title, be held in the city of Cincinnati, during the autumn of 1850,— that the precise time be left for the President of the Ohio Board of Agriculture, and the President of this Congress to determine, and that circulars be issued inviting all kindred associations and societies, as well as individuals interested, to attend its meeting.

3d. That the meetings after the next one be held biennially, and that this Congress recommend that the meeting for 1852, be held in Philadelphia.

The report was unanimously adopted.

Reports from several State committees were then handed in and referred to the appropriate committee.

Mr. Downing, chairman of the General Fruit Committee, reported a list of varieties to be recommended for general cultivation; and also a list of varieties to be rejected, which induced an interesting discussion, which consumed the remainder of the day, and the greatest part of the succeeding one, and which was participated in by many of those present. This discussion will be given at length in the published proceedings, which will be issued shortly.

Mr. Downing also introduced a Constitution and By-Laws for the American Pomological Congress. The Congress adjourned sine die on the afternoon of the second day, after an interesting, harmonious ond useful session,—the members congratulating themselves that all difficulties heretofore existing had been so amicably terminated, and separating with great good feeling.

Pear Tree and Fire Blight.

I have within the last few years lost nearly all my most valuable pear trees by the disease called "fire-blight"—commencing at the extremities, and dying downwards. Viewing the disease very much like hydrophobia, incurable, I have felt at liberty to try all kinds of experiments, and from present indications, I am satisfied that I have discovered a remedy.

I have a pear tree in my garden now sending out new shoots from every branch through a bark as black and dead as it can well be. The tree seemed dead in every limb; when I first discovered the leaves changing and fruit withering, I at once applied what had appeared successful the year previous. I say "*appeared,*" because other remedies had been used, and it was uncertain which was the real specific. The application was as follows: I reremoved the earth about the roots near the body as deep as I could conveniently, making an open tunnel around the tree, into which I poured 4 quarts of boiling water; as soon as the water had disappeared, I emptied a quart oil-can of whale oil upon the exposed and steaming roots, and also upon the body of the tree. The next day I syringed the whole tree with oil-soap water, very strong. Shortly after, I discovered a new bark forming under the black, dead bark outside, and now the tree is really a curiosity.

My impression is that the real specific is the whale oil, but as I had used the boiling water in both experiments, it should be mentioned as a concomitant, and it may be found essential to a cure. The tree upon which I tried the same remedy last year was not as much diseased, and having cut off the black part, I had no opportunity to discover the effect upon the diseased limbs. The tree revived at once, and has since evinced no symptoms of disease. J. W. F. *Hudson, July* 19.

Stereotyped Errors.

Extract from the letter of a correspondent:—"There is an article going the rounds, taken from the American Agriculturist, that contains a number of fictions, such as that the *peach* was a poisonous almond, (when properly it don't belong to the same genus,) and that it was introduced into Persia to poison their arrows with its flesh! That the nectarine and apricot are natural "hybridation" between the peach and plum; (the apricot is a distinct *genus*, containing at least two species;) that cultivation has given to the cherry a separate stem for each berry, thus improving its quality! That cabbage is derived from the common sea-kale!"

Varieties of Fruit.

Eds. Cultivator—On the 246th page, under the head of "Horticultural Items," you copy from the *Southern Cultivator* the remarks of a correspondent concerning fruits. This gentleman says in so many words, that out of all the choicest varieties imported from France, England, and the North, "there is not one tree that has borne fruit equal in quantity or quality to our common native kinds." Just there I am at issue with any man, North, South, East or West. I have an opinion diametrically opposite. And lest this correspondent may deter our friends "in the South and elsewhere about" our country from making purchases of improved fruits, I beg to say, I think he is either very fortunate in having very superior "common native kinds," or very unfortunate in only seeing or hearing of very inferior "common" foreign kinds.

To the end that your readers may know what opportunity I have had to be a judge, permit me to say, I have been in the South over 40 years, born in Columbia, S. C., where N. Herbmont and J. S. Guignard, Esqrs., both lived, (both were prominent horticulturists 30 years ago;) I lived in Philadelphia two years, and have been in Mississippi 19 years.

My father had a fine orchard of apples, peaches and plums 30 years ago, and was intimate with the two gentlemen named. I began to purchase foreign trees in 1833, and to grow seedlings a year or more prior, and brought peach stones from the New Jersey orchards home with me in 1829. I have grown, fruited, and cut down not short of 1000 seedling peach trees. I have seen and eaten the peach, North, South and West. I have had ripen this year not less than 80 to 100 varieties of the peach, and taken notes of 70 varieties. I have had fruit here, not less than 20 varieties of the apple this year. Will this give me any right to give an opinion? But further—in my section of this State, Mr. Lambert—in Vicksburg—has an orchard, which he markets the fruit of, and though surrounded by thousands of peach trees, no seedling fruit can sell by side of his own at half price.

In my orchard there are about 2000 peach trees, numbering about 140 varieties. Some are *seedlings* of Mississippi, but generally *these* are varieties that ripen *after* the foreign are gone; some early varieties are excellent, which are natives, but they are uncommon, and are not, one out of ten thousand trees that ripen, say, in July. I allude particularly to Elmira and Magruder, the only two that I have yet seen that will at all compare with early Tillotson or early York *true;* and no one who has tasted fruits here, at Lambert's or Hatch's, will pretend to bring in comparison the "common" or uncommon "native varieties."

Readers of agricultural papers pretty generally know my name, and know that I am always for my own, my native land, but in this matter I cannot advocate the native fruit against an absolute demonstration. Let me ask, what are the foreign varieties of peaches? They were seedlings, but they are selections from every land, North, South, East and West, across the water, and from both continents, and to get these 140 varieties, there were probably millions discarded as worthless, and almost a century in making the selection. Shall we at a dash of the pen, discard the judgment and the experience of our forefathers?

A Michigan man says, we have the clime of the peach; a Philadelphian insists that he has the very same; a South Carolinian finds nothing at all equal to his seedlings, a distinguished jurist of my own land, says a little Dr. of my name is doing incalculable injury by advising the *improved*, (I say the selected) fruits—and I say France and England, and New-York, and Massachusetts, or even Mississippi, have given fruits worthy of culture.

There is no possible way of proving these matters. I heard of a woman once who fancied to kiss a cow; this was all *taste*, and we cannot combat that.

This I will do. If any man *from Michigan* to Florida, from Maine to California, will furnish me with 20 peach trees, ripening from June 10 to Sept. 1, equal to Early York, Crawford's Early Melocoton, Royal George, Smooth Leaf, Bellegarde, Oldmixon Cling, Druid Hill, Smooth late, &c., I will give undoubted security that I will give $100 for the 20 trees, so soon as a jury of 12 will pronounce them only equal to the above, and of that No. 1 class of peaches which ripen in succession. I do not this as a banter. I have no desire this way. But if I could get such trees, I could sell of young trees $100 worth in a year, and then be known as the individual who did so much for my country.

Now these trees may be in the South, and natives too, but to collect them would cost more time and money than they are worth. I have been collecting for five years, have begged for the best natives, and but five of the very best do I find worth culture.

I want peaches from July 1st to Nov. 1st. Would I act wisely to collect seed from every direction, plant and cultivate probably 1000 trees to get 20 varieties? Or had I not better pay $10 for the 20 trees that are certified to be ripening in succession and to be No. 1?

I know there are choice seedlings, for I have introduced two myself. I know the Lemon Cling, Heath, Columbia, and some others will produce very similar and often excellent peaches, but this only makes the rule stronger.

Where have the thousand and one varieties of the peach come from, if seed from good trees will produce good fruit?

Nobody would plant seed from a diminutive half ripe peach, if they could get the best, and of course would never have the mean.

Go into any seedling orchard in America and get 20—aye, 10, or 5 varieties of peaches equal to Crawford's Early or Late, and I will go into the nearest and show you three-fourths not worth culture.

I have sold trees to gentlemen born in the South, who were sixty years of age. Are they so foolish as to buy of me inferior fruit, after seeing the fruit?

I have sold fruit trees, though I am a cotton-planter. And I dare think I have the largest variety of fruits owned by any amateur horticulturist—a private person—in these States. M. W. Philips. *Edwards, Miss., August* 31, 1849.

Haskell Sweet Apple.

In the last No. of *The Cultivator*, under the Horticultural Department, I see, in answer to inquires respecting the best sweet apples, you name the Haskell Sweet, for the fall.

I should be pleased to know from you, if this is the same apple described by Cole, in his recent fruit book. If it is, it will present the singular fact of an apple of high merit disseminated at a distance, and yet here in Essex county hardly known at all beyond the town (Ipswich) where it originated. It would also confirm my own opinion of its superior qualities.

I know not why Mr. Cole calls this the Sassafras apple. The original stock is now standing on a farm once owned by a Dea. Haskell, whence its name. Allen W. Dodge. *Hamilton, Mass., August* 24, 1849.

[This is the same as Cole's Sassafras apple—it has been cultivated by Robert Manning, of Salem, who thinks it the best autumn *sweet* apple—it has also proved fine at Macedon, in western New-York. Ed.]

The Chinese Chrysanthemum.

The chief attraction of this plant is the lateness of its period of flowering. In mild autumns, succeeding the dahlia, it continues flowering in the warm sheltered border, till finally checked by the severe frosts of approaching winter. The roots, with us, have endured the severest winters unprotected. Treated as a green-house plant, and kept in neat compact bushes, instead of the long, slender, bare stems, too often seen, it forms a fine blooming ornament for the early part of winter. The following remarks on the mode of treating this plant, adopted by the Chinese, who are very successful in its culture, are copied from a correspondent (Robert Fortune) of the London *Gardeners' Chronicle*:—

87—THE CHRYSANTHEMUM.

"The method of cultivating the Chrysanthemum in China is as follows. Cuttings are struck every year from the young shoots, in the same manner as we do in England. When they are rooted, they are potted off at once into the pots in which they are to grow and bloom; that is, they are grown upon what would be called by our gardeners "the one-shift system."

"The soil used in potting is of a very rich description. About Canton it is generally obtained, in the first instance, from the bottom of lakes or ponds, where the Nelumbeum or Water-Lily grows. It is then laid up to dry and pulverise for some months, when it is mixed with old night-soil taken from the manure tanks found in every garden. A heap of this kind, after being laid up for some time and frequently turned over, is in a fit state for potting the Chrysanthenum. Manure water, taken also from the tank already noticed, is liberally supplied during the growing season, and the effects are visable in the luxuriant dark green leaves which cover the plants.

"In forming the plants into nice compact bushes, which, with due defference to Chinese taste, I think much prettier than animals and "seven-storied pagodas," their system is as follows: The plants are trained each with a single stem; this is forced to send out numerous laterals near its base, and these are tied down in a neat and regular manner with strings of silk thread. By having the plants clothed with branches in this way, and by keeping the leaves in a green and healthy state, the specimens never have that bare and broom-headed appearance which they often present in England when they are taken into the green-house in winter.

"About Shanghae and Ningpo the Chrysanthemum is still better managed than it is near Canton; but the success which attends it may also be attributed, partly at least, to the more favorable nature of the climate, the plant being indigenous to the central or more northern parts of the empire. The system of cultivation is nearly the same; the main points attended to being those which have been noticed, namely, choosing a rich soil, planting at once into large pots; training to a single stem, and inducing it to send out numerous laterals, and giving liberal supplies of manure water during the growing season. The Chinese are fond of having very large blooms, and, in order to obtain these, they generally pick off all the small flower-buds.

"In China, as in England, the Chrysanthemum flowers during the winter months. When in bloom it is in great request among the people, and is used in the decoration of court-yards, halls and temples. It is everybody's plant, and blooms alike in the garden of the lowly Chinese cottager as in that of the blue-buttoned mandarin.

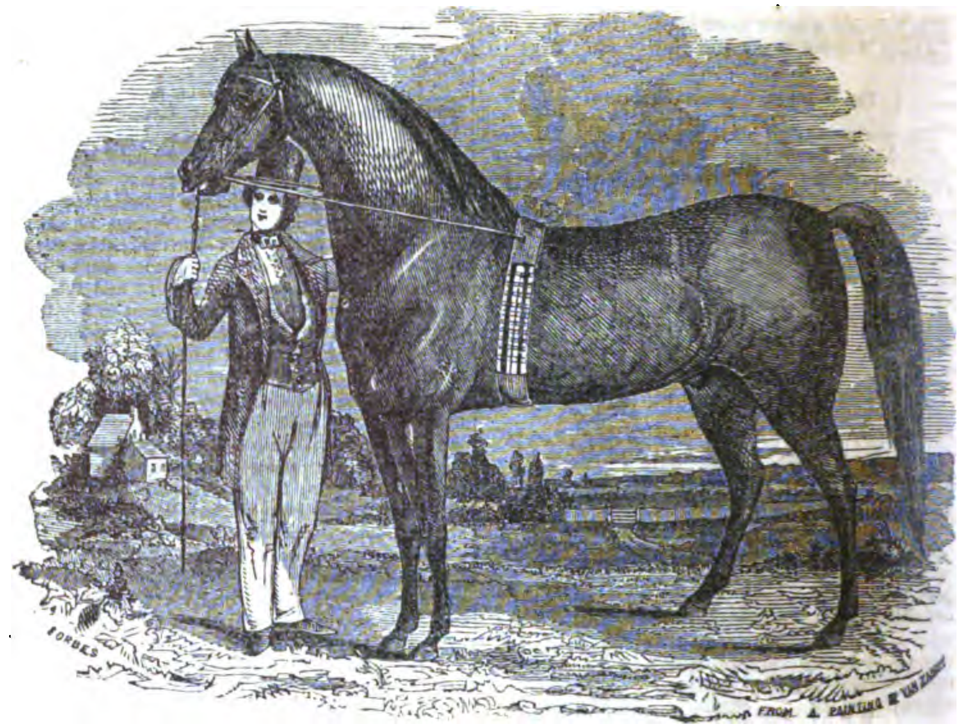
"Although we are indebted to China for the parents of those varieties of Chrysanthemums which enliven our gardens during the dull months of winter, yet, strange to say, the progeny is more numerous in Europe than in China itself. Some of those beautiful kinds raised by Mr. Salter in France would be much admired even by the Chinese florist. It is a curious fact, however, that many of those kinds, such as formosum and lucidum, which were originally raised from seed in Europe, are also met with in the north of China."

Watering Newly Transplanted Trees.

In very dry seasons, like the present,—or, as it was a few weeks ago,—it is often important to water newly transplanted trees; but the common mode is very objectionable. When the water is poured on the surface, the soil is apt to crack, and let the moisture below escape through the openings, so that its utility may often be very doubtful. Latterly I have applied the water differently. Dig a hole near the tree so as not to disturb its roots, and pour in a pailful. Then draw in the loose earth till the hole is filled, and covered up completely, so that nothing *wet* is visible; and no cracks will ever appear. A tree treated in this manner will not need watering again for a week.

Ligatures for Budding.—All the budding that I have done of late, has been bandaged with the leaves of the *English bulbous Iris*, which are sufficiently strong for this purpose, if gathered and kept from the wet as soon as vegetation ceases. They are even good yet without such precaution, though the ends indicate the approach of decay. Each leaf will make two bandages. David Thomas. 8*mo.* 24, 1849.

☞ This will be found one of the best months in the year to obtain subscribers to "The Cultivator;" and we trust our Agents will give as much attention to the matter as possible.


FORBES
FROM A PAINTING BY VAN ZANDT

Blood Horse "Alexander."

This fine animal is owned by Mr. E. H. IRELAND, of Albany. He received the first premium in the class of blood horses at the State Fair at Buffalo, in 1848. He is a horse of commanding appearance, and the committee who awarded him the premium remark—"He is a beautiful blood bay, fine bone, high carriage, and beautiful action. He is eight years old, and a superior horse for all purposes." He has stood in this city for several years, and his patronage has been extensive.

The Farmer's Note-Book.

Trial of Plows in Seneca County.

To the President and Members of the Seneca County Agricultural Society:—

GENTLEMEN—When we received the notice of our appointment to act as judges at the trial of plows in Seneca County, we felt in common with our farming community, the importance of the movement, and the benefit to arise from a careful, judicious accomplishment of the purpose.

As practical farmers, accustomed to the plow and its use, we feel justified in presenting a few remarks in connection with the matter before us, for the consideration of the farmer, and the mechanics, who are disposed to aid us in the proper arrangement of the implements we need in our vocation, and more especially the indispensable and important implement, the PLOW.

We think it has been long evident that caprice and accidental circumstances have given rise to a large catalogue of plows, which, upon trial, have disappointed the hopes and wasted the means of the purchaser; of this class of plows, few, perhaps, have been constructed by makers having a knowledge of the *use* of the implement, and but little of the skill or science necessary for the construction of a *good* plow.

There seems to be another error also prevalent among plow makers, too often adopted by farmers, boding evil to our agricultural success, or at least to a thorough and proper tillage of the soil; we allude to the frequent attempts to produce plows which shall, by turning broad furrows, work over two acres per day, gaining time at the expense of the necessary breaking up and essential pulverising of the soil. Thus, farmers are tempted with plows to turn furrow slices of 14 to 16 inches in width, while the depth rarely exceeds 5½ inches; we will not deny that circumstances may exist where a broad furrow of twelve inches and more in width *may* be useful; but as a general principle, greater *depth* with pulverisation, should be the main object of the plow maker, the second effort being to overcome resistance with the least power.

We feel strong in the opinion, that large masses of soil, turned over in furrows of fourteen inches wide by six inches deep, must require a large outlay of subsequent labor to render the soil friable and in fit condition to receive manure in a well mixed state; neither will the land so treated be in a state to afford thorough nourishment to the seed deposited from the manures intended for it. The gain of time therefore, in rapid plowing by broad furrows, may be and oft times is an expensive system.

Another error in the manufacture of plows, from which, as practical farmers, we are called upon to suffer inconvenience is, the imperfect line of draft presented to our teams, not only because this line is not preserved at right angles with the shoulders of our horses, but also because of the arrangement of the beam as attached to the iron frame of the plow body. In this latter arrangement much difficulty appears to exist, and fancy has too much sway; the obliquity of the beam to the line of the land side, may be necessary in some degree to produce a direct line of draft from the true point of resistance, but as practical men we have reason to object to the too frequent need of shifting our guide bolts, and the use of other expedients to compensate the erroneous line of draft adopted by the makers. We feel well assured that our agricultural mechanics are abundantly skillful, and possess sufficient science to correct this inconvenience when brought to their notice.

When we consider the object or intent of the plow, we arrive at the fact that it is to perform in the hands of the farmer the same operation, and to produce the same effects, as the *spade* in the hands of the gardener; that is, to turn over and thoroughly to break up the soil. Now the man and his spade acting together is a most complex and perfect tool; but the time is yet to come when a *simple* machine shall be produced to accomplish with *equal excellence* the same results as the man and spade. We may not doubt however, from the vast improvement of late years, that such a machine will in time be constructed; the talent and science of our agricultural mechanics fully justify such expectations, and the rapidly increasing attention of farmers to the study of their vocation, will act as a stimulus to the inventor and a check upon visionary attempts.

With these prefatory remarks, we now present a report of facts connected with the trial of plows, facts which offer to every man of thought and observation much matter for reflection.

On the morning of Thursday, the 30th August, 1849, we reached the grounds selected for the trial of plows. The field presented a generally uniform appearance, gently sloping from the east to west; the soil was a clay loam, rather tenacious, as is most of the wheat land of the fertile county of Seneca; the sod was of timothy with a mixture of clover, and had not been plowed for several years. It should here be mentioned and remembered that since the month of May last, but little rain had fallen in this section of country, which was made manifest by reference to a meteorological table, as well as by the condition of the soil. Nevertheless, as the soil was uniform in its nature, so the resistance offered was relatively the same to each plow, and the trial was alike to all, and under like circumstances.

A stationary power had been well placed, midway between the eastern and western extremes of a plat of ground 150 feet long; a traveller or guide was prepared to bear and direct the rope, in order that each plow might be directed with precision.

Furrows had been previously opened six inches in depth. The plows were entered on the secretary's books in numerical order, and called to the trial in the same order. A substantial dynamometer was placed in our hands with a certificate from the proper officer that the same had been tested and proved by the State standard, and was correct, indicating power as high as one thousand pounds.

An extent of ground was carefully surveyed, and marked into spaces of 30 by 300 feet, for the purpose of exhibiting the manner in which each plow could perform the work required.

With these and other arrangements, our duties were comparatively easy, and as no haste or hurry was permitted, we continued our labor through two successive days, strengthened by the hope and belief that we were entering upon a system which, if continued from year to year, would in due time work a large and positive benefit.

The following table gives a full and particular statement of the trials, classifying the implements in order, from the lesser to the greater power required to overcome the resistance offered.

By Stationary Power.

Depth of forrow, 6 inches—Width of furrow, 12 inches.

		Pounds.
1.	Burrall's wheel Plow, No. 2,	290
2.	Burrall's Wheel Plow, No. 3,	295
3.	Lamport Iron Beam Plow from Ovid,	340
4.	Burrall's Wheel Plow, No. 4,	345
5.	Penn Yan Plow,	355
6.	Burrall's Wheel Plow, No. 5,	356
7.	Buckeye Iron Beam,	372
8.	Crane Plow, with cutter,	415
9.	Burrall's Landside Plow,	427
10.	Dundee Plow,	441
11.	Burrall's Landside, No. 5,	485
12.	Crane Plow, with coulter,	493

By Horse Power.

Depth of furrow, 7 inches—Width of furrow 13 inches.

		Pounds.
1.	Burrall's Wheel Plow, No. 3,	489
2.	Penn Yan Plow,	493
3.	Burrall's Wheel Plow, No. 5,	511
4.	Burrall's Wheel Plow, No. 4,	519
5.	Lamport Iron Beam,	520
6.	Dundee Plow,	520½
7.	Burrall's Landside, No. 2,	524
8.	Crane Plow,	533
9.	Burrall's Landside, No. 5,	673

The trial by horses having been made on the second day, several owners of Plows entered, did not appear in time.

The plowing performed by the several implements was good and uniform, evidencing much skill on the part of the plowmen. Understanding that the chief object of the trial was to ascertain the true and reliable estimate of the *power* necessary for good work, we do not deem it nececsary to particularise the work of any one plow; all was good, and the facts set forth in the above table will enable every man to draw right conclusions and safe estimates.

Among the facts presented to our notice, were two frames of the wheel plow, which had been used for several years, they were worn through the mould board, and the wheel had yielded on its margin, being the substitute for a landside; on examination, the journals or points of the axle of the wheels, were sound and perfect.

Having witnessed the excitement among men of science, as well as among the large assemblage of practical farmers convened on this occasion, we respectfully urge upon the farmers of this State, and upon agricultural mechanics, frequent meetings and interviews upon the plan of, and with similar objects to this meeting in Seneca county; the true interests of both will be substantially promoted, and science will be more kindly courted to deepen our furrows, to pulverise our soils, and thus add to our general prosperity.

Saturday, September 1, 1849.

B. B. Kirtland, Rensselaer Co.,
Elias Cost, Oaks Corners, Ontario Co.
John Mallory, Penn Yan, Yates Co.
Judges of the trial of Plows,

To John Delafield, Esq., President
of the Seneca County Agricultural Society.

Litigation.

In the last paragraph of my article on Litigation, I am made to say "In this respect we are *not* far behind the Danish colonies in the south." I intended to say that *we are* far behind them. A gentleman who spent some months in the island of St. Croix, and who paid particular attention to this subject, informed me that nine suits out of ten are settled before "The Reconciling Commission."

The same gentleman has placed in my hands, a copy of the "Ordinance respecting the Reconciling Institution," issued by the King of Denmark at Copenhagen, 17th December, 1798, which he received from one of the Judges of that Island. Perhaps I may notice it hereafter. AN OBSERVER.

Oneida Agricultural Society.

We had the pleasure of attending the Show and Fair of the Oneida County Agricultural Society, held at Hampton Village on the 26th and 27th of September last. This was the ninth annual exhibition of the society, and in the opinion of those who have attended on former occasions, it afforded evidence of progress in reference to those objects to which the association is devoted. The writer was previously unacquainted with the agricultural products of the county, except from such specimens as have been presented at our various State Fairs, and had not, therefore, the means of comparing the present with former displays.

As to the live-stock exhibited on this occasion, the cattle and horses were more numerous than at most county exhibitions which we have attended. In respect to quality, the general average of the cattle was hardly as good as we had expected to find. We say it in no captious spirit, but with limited exceptions, the cattle possessed but few of the characteristics indicative of proper breeding; that is, they had not the uniformity of points which showed that the breeders had any distinct or definite objects in view—their occasional good qualities appearing to be rather the result of accident, than a well defined system. We noticed five or six full blood Devons, (rather too small in size for the present standard of that breed,) and a couple of fine short-horn heifers; most of the stock appearing to be a mixture of various breeds with no particular traits of either.

There were many working oxen and steers. Among them we noticed the fine cattle of S. H. Church, which received a silver medal at the late State Show, the oxen of John Bryden, which took the second premium, and the three-year-olds of H. H. Eastman, which took the first premium for steers on the same occasion. Several yoke of the oxen performed well on a loaded cart.

There were but few good swine. Of sheep there were good specimens of Saxons, Merinos, and several pens of mixed blood English sheep. Of poultry, there was a fair show. Mr. Redmond, of Utica, had various kinds of fowls, Dorkings, Javas, Games, &c.; Bremen geese, and several varieties of ducks.

The show of implements was quite large—especially of the various kinds of improved plows, cultivators, straw-cutters, &c. The principal manufactured articles, dairy products, fruits, vegetables, &c., were exhibited in a large tent, forming a collection highly creditable both in extent and quality.

The plowing match was an interesting display of approved plows and of the comparative skill of plowmen. We think there were seventeen competitors. The soil was very firm, being somewhat stony and gravelly, and covered with a tough and close sward, which rendered it difficult to be plowed well, to the depth required—seven inches. It was, however, a very suitable place for such a trial, forming a better test of the capacity of plows for working in a tenacious soil, than is usually obtained on similar occasions. The work was generally well done. In a few instances the furrows were too wide, and consequently laid too flat and heavy. Among the plows used, we noticed the Scotch plows made by Mr. Auld, of New-Hartford, others made by Messrs. Milner of Whitestown, Wilson of Vernon, Pratt of Syracuse, Delano of Mottville, Brainard & Wheeler of Rome, Ruggles, Nourse & Mason of Worcester, Mass., and Smith's Michigan sub-soil plow, offered by Newel French. The latter consists of two plows set one before the other, in the same beam. The forward one skims off two or three inches of the sward, and the hinder one goes four or five inches deeper, raising the lower soil and throwing it completely over the sward. What would be the usual working or comparative advantage of this implement for soils in general we are not prepared to say; but on this occasion it left the soil in fine condition for a crop. It was drawn by four horses, and thoroughly stirred and reversed the soil to the depth of nine or ten inches. It required but one man to hold.

The address to the Society was delivered by its President, Henry Rhodes, Esq. It was a sensible, straight-forward document, well calculated to urge on the people of the county in the various enterprises which they have already so well begun.

The number of people in attendance on this occasion was not less than eight thousand, not a small proportion of which were ladies; and the spirit of ambition for improvement in most departments was strikingly manifest among all classes.

Farmers' Wives and Daughters.

EDS. CULTIVATOR—I have observed many articles in agricultural and other papers, in reference to farmers' wives in New-England, which I am sorry to see have not met with a very cordial acceptance by that class for whom the authors of these articles have poured forth their sympathies. Some persons who have never entered a farmer's house, and who have not the least conception of the manner in which the wife or daughters spend their time, give such melancholy descriptions of their sufferings, and draw such fabulous pictures of their employment, that it would almost induce the slave at the south to forget the pain of his bleeding back, and the hardships of his daily toil, in sympathy for the degraded and much abused wife of the New England farmer. Doubtless all of that much oppressed class, in order to mitigate whose sufferings these articles are written, feel very thankful to those, who from gallantry, or from the kindness of their hearts, have enlisted in their behalf. But we would like to make one suggestion for their benefit and ours, that they would lay aside their pen until they had informed themselves upon the subject upon which they would write, and we trust they will find their sympathy uncalled for.

There is another class whose opinion in reference to farmer's wives and daughters is scarcely less erroneous, though they have had a personal knowledge of the extent and nature of their employments. Their false ideas arise from the incorrect standard by which they estimate a woman's true worth. There are many who consider *that* labor the hardest to be endured, and that servitude the most severe which affects in the least, the complexion of their delicate hands. It is very natural for them to breath forth their sentimental lamentations for the black-handed objects of their pity, only showing a lack of judgment in observation, and necessarily ridiculous fallacies in conclusions. It is persons of this class, I imagine, who have penned these articles to which we have alluded, and an article of this class, from the *Springfield Republican*, in your last number, is, in my humble opinion, a ridiculous specimen of that most ridiculous class of pieces. That writer complains that the life of the farmer's wife is "nothing but mend and botch, cook and bake," &c., &c. 'Tis true, the farmer's wife and daughters *do labor*; but is it not as honorable for them to do that which promotes their health and happiness, as to sit in their parlors, spending their time in embroidery, reading foolish novels, or thumming the piano to the tune of "Susannah, don't you cry," and other popular negro melodies, while a servant girl in the kitchen performs their duties for them. It is said, too, that New-England farmers kil their wives with hard work. This assertion is too notoriously false to need refutation; and even if the farmers were such brutes, the women of New England are too independent to submit to such treatment.

Where do we look for the healthiest women? Is it among that class who never see the sun rise, or the dew sparkling in his early rays? Or is it among those who are compelled by their avocations to rise early, and to inhale the fresh and invigorating morning air? It is an undoubted fact that farmer's wives and daughters, as a class, are the most healthy, are capable of enduring the greatest fatigue, and consequently live to a greater age.

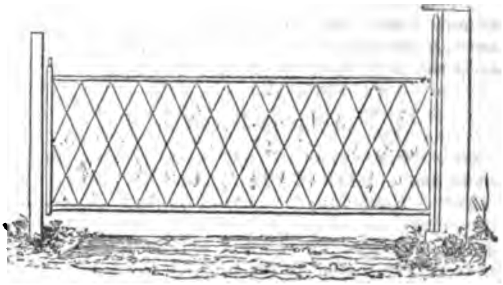
The writer in the Republican accuses the farmers of loving money better than other men, and says, that in order to gratify this passion, they make slaves of their wives, and that "while they are enjoying the ease and luxury of independence, the cares of their faded and broken down wives, know no relaxation." Are farmers more avaricious than other men, and is the dollar *their* only standard of respectability? I have always supposed that wealth was more powerful in the city, and among commercial men, than in an agricultural community: and where, if not in the country, do wives receive their due share of kindness and attention from their husbands? In this section of New England, the wives and daughters enjoy the reward of their toil sooner than the husbands and farmers; owing perhaps, to the fact that the female character is more susceptible to the aluremements of fashion and luxury than the other sex, so that there are more fine ladies than gentlemen, to be found in farmer's families. The writer in the Republican goes on to say, "that from such a life, the girls of our day are learning to shrink, because they know they are to be sacrificed." Girls who have been taught to despise labor, and to spend their time in frivolous amusements, would of course shrink from such a life. But those who are willing to be useful, who desire to become truly independent, know that they are making no sacrifice in becoming farmers' wives. There is one class of writers who would deprive the farmer's family of all participation in the accomplishments of modern female education, and consider them it only for the drudges which the first writer alluded to describes them to be. This latter class would graciousy allow them to spend their winter evenings in listenng to some useful, practical work on natural history, he management of bees and the like, read by one member of the family, while the rest are employed in knitting. They do not seem to consider them capable of appreciating the beauties of poetry and elegant literaure. Perhaps they might permit them to read Thompson's Seasons, and Bloomfield's "Farmer's Boy," as having reference to rural pursuits in general. Is there any reason why a farmer's wife and daughters should not receive the same education, and be allowed to read he same books which are considered proper for females of other classes?

Now I, for one, protest against this constant interfeence with our rights and privileges. Farmers are as ntelligent, and as capable of taking care of themselves as the merchant or mechanic, or the professional man, and they have too much freedom to be placed under the guardianship of those who know nothing about them or heir employment. Let us spend our time as we please, provided no other person's rights are interfered with. If we prefer doing our own cooking to having it half done by girls who feel little interest in doing it well, why may we not be allowed the privilege?

There are some who seem to think the farmer in a very degraded condition, and who kindly wish to elevate him. Now if this is really their object, the best way to accomplish it, would be to endeavor to render abor respectable, and to teach the rising generation that industry is the surest road to respectability. There can certainly be no employment so well calculated to refine the character, and 'develop the noblest faculties of our nature, as farming, provided the cultivation of the mind is not neglected; and for this there is no necessity, and indeed no excuse. Any farmer can find sufficient time and opportunities for reading and study, if he is disposed to improve them. A FARMER'S DAUGHTER. *Manchester, Vt., Sept.* 20, 1849.

A Cheap Farm Gate.

This design is for a gate four feet high and twelve feet long; but they can be made of any required length or height The rails and forward upright are 2+3 inches, and the hind upright 3+4, framed together. The cross pieces may be round, made of small hemlocks and peeled, or they may be of sawed stuff an inch square. The rails are bored with an inch auger, two holes side by side, and slanted each way to accommodate the cross pieces, which are a foot apart. After the gate is put together, nail the cross pieces at each end, and nail them together in the middle with wrought nails, which should be clinched. The post on which the gate is hung, has a plank cap on top with a hole through it for the round tenon on the upright piece of the gate; at the bottom it may turn in a piece of wood morticed into the post, or what is much better, in a stone, with a hole drilled in it about an inch.



89—FARM GATE.

The advantages of this gate are, its cheapness —a man can make one in about six hours, and there is no iron about it except the nails,—and it will not *sag*, as the cross pieces brace each way, thus remedying the great defect to which gates are liable. W. L. EATON. *East Weare, N. H.*

Cisterns for Live Stock.

I have a water-lime cistern ten feet in diameter, and six feet deep, which has been estimated to hold 90 barrels. For nearly two months of our late very dry season, it has chiefly furnished the drink for half a dozen cows and four horses, while many farmers who had no such cisterns, drove their cattle to considerable distances.

In some parts of England it has been found that the rain from the roofs of the necessary buildings on a farm, is sufficient, if saved, for all their live stock through the year; and we put the question, Are not *cisterns* as cheap as *wells?* Many wells in this part of the country, especially in the Hamilton Group, are not fed by springs in severe drouths, and become in effect, cisterns, soon to be exhausted. Without any roof to turn in more water, they are useless till the soaking rains of autumn, saturate not only the soil, but the subsoil to considerable depths. On the contrary, a cistern which depends on a roof for its supply, may find business for its pump after a very moderate shower.

Water-lime cisterns will not yield soft water for a long time after they are in use. Ours was plastered anew five years ago, and great improvement is yet needed in its quality for washing. Another hint may be useful. Water-lime plaster requires to be covered up completely from the frost. After an unsuccessful experiment, we had timbers laid across the cistern, covered with two-inch plank, and pine shavings to the depth of two feet. It was then carefully sodded over, and we have discovered no encroachment by the frost. **Aquarius.**

☞ A lady at my elbow says, the expense (including damage) of driving cows long distances to water, is greater than to turn all the rain from the barn roof into cisterns; and she also suggests that farmers should not bring their cattle round the house, or into the door-yard, where mud would be made for their wives to scold over.

Profits of Farming.

Eds. Cultivator—I notice an article in the September number of *The Cultivator*, signed "A Farmer, *Hillsdale, Columbia County*," containing statements of the comparative productiveness of capital and labor, as applied to farming and other pursuits, suggested by the table in the July number of your paper, giving the estimate of the principal products of Seneca county, for the year 1848. He says—"that notwithstanding the superior advantages and management of the farmers of Seneca county, still the income on their capital and labor is vastly inferior to that of any other of the great industrial interests of our country." Now, on examining that table, I find the following results, viz: that the average nett profit over cost of production on the land devoted to wheat, was $11.25 per acre; on the land in Barley, $6.13 per acre; on that in Oats, $5 per acre; and on the corn lands, $7.25 per acre; and that the average of the whole 64,363 acres, devoted to these four principal products, was $9 per acre.

Assuming the average value of these lands to be $50 per acre, which I imagine is a liberal estimate, I find that the income or nett profit of capital would be, on the wheat lands, 22½ per cent.; on that in barley, 12¼ per cent; on that in oats, 10 per cent; and on that in corn 14½ per cent.; and the average rate upon the whole 64,363 acres, 18 *per cent. nett profit!* Now I would ask, what "other of the great industrial interests of our country" does or can produce an "income on their capital and labor" like this? Certainly not the manufacturers of New England, which I believe to be at this time as profitable as those of any other country in the world—and which, I think I may say without fear of contradiction, have not netted their owners for the ten years past, a profit exceeding 7 per cent. per annum upon their capital.

In the same September number of *The Cultivator*, is a statement of the products of the Lakeland farm of Mr. Foster, in that same Seneca county, in which 55 acres of wheat land, (the only crop of which particulars are given,) are stated to have produced 28 per cent. on the value of the land! Certainly I would not offer this premium farm as an exponent of farming in general, but I take it in some measure as an exponent of what farming *might be*, if the same skill, economy and capital was devoted to it as there is to many other of the great industrial pursuits. Again, "A Farmer" says that "the income of all the other great industrial interests of our country, is shown by the census to be from one hundred to two hundred pr cent. upon their capitals;" and to prove *this*, quotes in a note, the census of Massachusetts for 1845, where the manufacturing capital of that State is put down at over forty-six millions of dollars, and the value of their products at nearly eighty-eight millions "or," he adds, "near two hundred pr cent. on capital employed, and near $700 annual income from the labor of each individual." Here, it seems to me, is an important error, occasioned by leaving out of view the value of the raw material, which the manufacturers work upon, and which, though constituting a great part of the value of their productions when finished, is yet in no sense *their* production; for example—the cotton manufacturer, out of a pound of cotton, costing 12 cents, produces three yards of cloth, which netts him six cents per yard, amounting to 18 cents. Now the production of *his* labor and capital is not 18 cents—it is only *six cents*, the increased value of the cotton over its cost, and this is about the average proportion of the products of our manufacturers generally. So that instead of taking the *income of capital and labor* employed in manufacturing in Massachusetts at the "value of their products" when sold, it should be stated at only one-third of the amount; thus, the income from the capital and labor of the manufacturers of Massachusetts should be put down at twenty-nine millions, instead of eighty-seven millions and over—which would leave for each hand employed, 230 dollars annually, instead of near $700," as stated by your correspondent; and showing too, the earnings of individuals engaged in agriculture, by his own statement, to be nearly seventy dollars per year more than those engaged in manufacturing, &c.

It seems to me that the profits of capital and labor devoted to agriculture, have never been ascertained and understood in this country, and that a more thorough examination and calculation would show, that agriculture might be made to be what God intended it should be, the *most profitable*, as well as the *most natural* and *happy* pursuit of man.
Enquirer. *Stockbridge, Mass., Oct.* 5, 1849.

Agricultural Show in Scotland.

We have received a copy of "*The Scottish Agricultural Journal*," containing an account of the show of the Royal Northern Agricultural Society, held at Aberdeen in August last. It was the fourth exhibition of this association, and appears to have been a fine display of stock, implements, fruits, &c. At the dinner, at which the Earl of **Aberdeen** presided, *Mr.* **Pliny Miles**, formerly of Watertown, N. Y., responded, in a very felicitous manner, to a toast. "He said he was a son of a New York farmer who had received three first prizes from agricultural societies. They carried on a reciprocity system in the agricultural societies of the United States, which deserved attention. For instance, the society of New-York co-operated with Upper Canada, and exchanged the right of competing in the respective societies. The exhibition of live-stock which he had seen that day, was superior to what he was accustomed to see in America—not in number, but in quality. He had been extremely well pleased to observe the perfection to which the cultivation of fruits had been carried in Scotland. He had picked strawberries in the open air in Florida, in the month of February; but he had certainly never seen better strawberries, cherries, and peaches, than he saw at the Horticultural Show that day. He had seen, indeed, better pears and apples, but altogether he had been astonished at such an exhibition of fruit in this northern climate where there must be so short seasons. With reference to Sir James Elphinstone's remarks regarding the scarcity of agricultural implements, he would take leave to say, that the inventive genius of the Yankee had contrived a great number of these implements. One reason might be the cheap rate at which patents might be secured—for $30 any invention might be patented, from a mouse-trap to a steam-engine. (Laughter and applause.) He was a stranger in this city, and he would say, without compromising himself as an American and a republican, that he had drunk the health of the Queen and Prince Albert, and to the Navy and Army of Great Britain, for he considered that the governments of Great Britain and the United States, differed far more in name than in reality. (Loud cheers.) He considered it rational, and even laudable, in an individual to leave his own country with some national prejudice in its favor; but whatever prejudice he entertained against Great Britain had been entirely dispelled since his acquaintance with it. In conclusion, Mr. Miles returned his cordial thanks for the honor which had been done to his country and to himself. (Loud applause.)"

Improved Cotswold Sheep.

In answer to "J. P. R." in our September number, F. W. Ware, Esq., of Berryville, Clark county, Va., writes: "I import the improved Cotswold, called by some New Oxfordshire, for my own private use, not for speculation by sale." He states that he has purchased a part of his sheep from Mr. Charles Large, near Lechdale, Oxfordshire. Mr. W. says: "I wrote to him to send me none but Royal Prize Sheep, whenever he could spare them. I put no limit, but paid the sum he demanded; presuming that the best, of course, would be exhibited for the prize, and especially directing none to be sent but the prize sheep. Last year I received two ewes from the pen that took the prize at the Royal Society's Show at York; this year I have purchased five of the ewes that took the prize at the Royal Agricultural Fair at Norwich, to come over this fall after being tupped by a ram weighing, alive, 420 lbs., which took the prize of £40 as the best shearling long-woolled ram, at the Royal Agricultural Society's Show in 1847. When I use the words 'royal prize,' I mean, always, the prize given by the Royal Agricultural Society of England. I do so to avoid an unnecessary frequent multiplicity of words, believing the term used would be fully understood, for I am not aware that the *Queen herself individually* gave any prize, and of coure I could not be suspected of wishing to mislead by an improper expression."

Decay of Timber.

Eds. Cultivator—There are few people more deeply interested in that species of knowledge, which will enable us to detect the cause, and lead us to the discovery of means whereby we may delay the decay of timber used in building, than the farmer; yet how few there are who pretend to any knowledge on the subject, further than the adoption of some favorite idea, such as setting fence-posts top-end in the ground, or cutting timber at a particular time in the moon, or charring the lower end of fence posts, &c., without going back further than the first step towards the cause, if any exists, of the success of a fancy theory.

Circumstances frequently arise in practice which would seem to verify any favorite theory that might be adopted. For instance, there are no two adjoining trees of the same species, perhaps, that would endure the same length of time without decay; nor is there any one tree whose parts are all equally durable; the top part may be more durable than the butt, in one tree; and another in the immediate vicinity, of the same kind, but of different age, may be precisely the reverse. Hence the various conclusions which have been arrived at from experiments without a knowledge of the principles of premature decay.

There is not a month in the year that has not authority for being the best time for felling timber; and each author gives philosophical reasons as far as they go; but as the business of our philosophy is to sustain our conclusions, which have been established by experience, and of course, (as we think) cannot be wrong, we barely bring a few isolated facts as sufficient proof after our experience, to establish the theory beyond a doubt, when perhaps if those same facts were presented in connection with others, which would serve to arrange them in their proper order, they would sustain quite a different conclusion. There is a right place to begin, as all good farmers will be inclined to admit, to do anything they have to do, and no one has more to do with this subject; which is best considered, by seeking to designate that part of, or substance in timber, in which decay first commences. This has been identified by Mr. Kyan as albumen, which he says is the cause of putrefactive fermentation. The celebrated chemist Fourcroy, says there are five distinct species of vegetable fermentation; the saccharine, the coloring, the vinous, the acetous, and the putrefactive; but none are concerned in premature decay but the putrefactive. If then we take Mr. Kyan's opinion, which seems to be generally admitted by all who have observed the subject to any extent, we shall arrive at our conclusion, that the year and the season of the year in which a tree contains the least albumen, is the best time to cut it, unless the fibres of the wood have been too much weakened by age or disease. All timber for durability, should be mature in its growth, and if not diseased, it may stand a number of years after to advantage, if to guard against decay be the main object.

There is undoubtedly a particular time in the year when timber may be cut to favor its durability. In the present unsettled state of that point, we may locate it in the month of October in this climate, for more reasons than have ever been mentioned. We have good authority for believing that there is in the timber at this season, the smallest quantity of albumen and cambium, if not all other organic fluids liable to produce that species of fermentation which furnishes the acid necessary to unite with the albumen to produce the putrefactive fermentation. In cutting timber at this season of the year, we have the advantage of five or six months of weather cold enough to prevent any species of fermentation, or the propagation of any species of fungi; which is time enough, with proper care, to prevent any inherent cause of decay.

We also have good authority for cutting timber in mid-winter; but our own observation will create a doubt, when we see a tree with full grown leaves in the spring, that had been entirely severed from its roots the previous winter. The decay of timber is generally accompanied, if not caused, by some species of fungi, the spores being attracted by the albumen, or perhaps by the action of the albumen and acid, which together produce that species of fermentation peculiar to decay. Whether this be the case or not, it is evident from every day observation, that the exciting cause of decay in healthy timber, is produced by some external influence, which enters the pores of the wood where the grains have been cut across, more readily than it does laterally through the unbroken grains, which is the cause of decay in the ends of a log, while all other parts remain comparatively sound. It also favors the frequent observation, that a round fence post, the full size of the tree, will last longer than one of the same size split from a larger tree.

The idea of charring the lower ends of fence posts, was probably taken from the well known practice of architects charring wood to be laid into walls, or in places where it is subject to dry rot. It can be of but little service to timber for any purpose, that has not been thoroughly seasoned, and afterwards kept dry. The object of charring is to destroy the seeds or spawn of the fungi, if any have accumulated on the surface of the timber, but if the timber be not dry, or if exposed to wet afterwards, the charring can be of very little if any protection against the common effects of moisture in timber. It is possible that the moisture which enters through the charred surface, may be so purified as not to be so liable to putrefactive fermentation, as that which enters through other parts; then in order to derive benefit from charring fence posts, they should be charred above as well as below ground. DEAN.—*Lyonsdale, N. Y.*

Exhibitions of Agricultural Societies.

A greater interest has been manifested in these exhibitions the present year, than at any former period. From all quarters we hear that the displays have been on an increased scale, and the people have turned out to witness them in unprecedented crowds, often in face of wind and storm. We have received accounts from the following societies:

NEW YORK.—Counties—Queens, Suffolk, Rensselaer, Saratoga, Washington, Essex, Clinton, Jefferson, Fulton, Herkimer, Oneida, Madison, Onondaga, Seneca, Cayuga, Ontario, Orleans, Monroe, Livingston, Genesee, Erie, Niagara, Wayne. In addition to these, we have accounts from several town associations, particularly Avon, Livingston county, and Vernon, Oneida county. Several counties have adopted the plan of making permanent enclosures and erecting suitable buildings for the shows, charging all, except members of the societies and invited guests, a small admission-fee. This is the true plan, and will, under proper management, put the societies in possession of funds which may be used for the promotion of various improvements. The Rensselaer county society has excellent fixtures at Troy, and received at the last exhibition $2,200. Saratoga has provided grounds at Mechanicsville, and at its first exhibition there, the present season, received a liberal acquisition to its funds. Essex and Clinton have made a location at Keeseville, and hold their exhibitions on the same grounds and at the same time. A collection of seven to eight hundred dollars, was made at the first show held under this system, this season.

CONNECTICUT.—Litchfield, Hartford, New Haven, and Fairfield.

MASSACHUSETTS.—Berkshire, (shows at Pittsfield and Great Barrington) Worcester, Norfolk, Essex, Middlesex, Plymouth, Bristol.

VERMONT.—Windsor, Rutland, Addison and Chittenden.

MICHIGAN.—Frst State Fair, at Detroit—$2,800 received from the sale of tickets and for memberships.

GEORGIA.—State Fair at Stone Mountain—crowd estimated at six thousand. The *Southern Cultivator* says it was "the great event of the season," and that "everybody went away highly gratified."

We shall undoubtedly receive further accounts, and be able to give more particulars hereafter.

In relation to Seneca Co., N. Y., J. DELAFIELD, Esq., writes: "Our Fair was most successful. The cattle were numerous and excellent. The horses equal to any former exhibition; and this county has produced many of the finest animals in the state. The other departments were good, and so generally interesting was this celebration, that the village of Ovid was crowded for two days, taxing the liberal hospitality of all the residents, for the accommodation and comfort of visiters from a distance. The claim was cheerfully met, and thousands dispersed at the closing of the fair, with the kindest feelings, and hopes for many and oft-repeated gatherings, like this county fair."

Farming in Pennsylvania.

The following notice of the products of several farms in Montgomery county, Pa., is furnished by the Norristown Register:

Mr. George Hiltner, who lives on his farm, in the northeastern part of the township, containing 22 acres of cleared land, gave an account of its products, as follows: Wheat, 16 bush. on one acre, amount $17,60. Rye, 50 bush. on 3 acres, amount $30. Corn, 60 bush. on 3 acres, amount $36. Apples, 20 bush., amount $2. Hay, 8 tons on 8 acres, amount $96. Oats, 40 bush. on 3 acres, amount $12. Poultry, 50, amount $12. Eggs, 50 doz., amount $6,25. Butter, 500 lbs, amount $100. Calves, 4, amount $20. Potatoes, 40 bush., amount $28. Pork, 600 lbs., amount $36. The whole amount from the products of Mr. H.'s farm was $395,85.

Mr. Francis Davis, who lives on his farm, in the eastern part of the township, not far from the line between it and Whitpain, containing 47 acres of cleared land, gave the following account of its products: Wheat 100 bush. on 4½ acres, amount $105. Rye, 14 bush. on 1½ acre, amount $9,80. Corn, 200 bush. on 7 acres, amount $120. Hay, 20 tons, on 14 acres, amount $240. Oats, 200 bush. on 6 acres, amount $60. Poultry, 60, amount $18. Eggs, 150 doz., amount $24. Butter, 900 lbs., amount $180. Calves, 6, amount $24. Potatoes, 5 bush., amount $4. Pork, 1000 lbs., amount $60. The whole amount from the products of Mr. D.'s farm was $984,80.

Mr. George Freas, who lives on his farm, near the last mentioned, containing 44 acres of cleared land, gave an account of its products as follows: Wheat, 120 bush. on 5 acres, amount $138. Rye 15 bush. on ½ acre, amount $12. Corn, 200 bush. on 6 acres, amount $120. Apples, 60 bush. amount $12. Hay, 22 tons on 14 acres, amount $264. Oats, 240 bush. on 6 acres, amount $72. Poultry, 100, amount $40. Eggs, 100 doz., amount $14. Butter, 1200 lbs., amount $240. Calves, 7, amount $35. Potatoes, 20 bush., amount $16. Pork, 1500 lbs., amount $90. The whole amount from the products of Mr. F.'s farm was $1053.

Mr. Henry Lysinger, who lives on the Germantown and Perkiomen turnpike, on his little farm, containing 11 acres of cleared land, gave an account of the products as follows: Wheat, 20 bush. on 1 acre, amount $22. Rye, 12 bush. on ½ acre, amount $8.40. Corn, 75 bush. on 1½ acre, amount $45. Apples, 100 bush., amount $25. Hay, 6 tons, on 3 acres, amount $72. Poultry, 30, amount $10. Eggs, 25 doz., amount $5. Butter, 350 lbs., amount $70. Calves, 2, amount $10. Potatoes, 5 bush., amount $6. Pork, 700 lbs., amount $42. The whole amount from the products of Mr. L.'s little farm, was $313.40.

Mr. Andrew Reed gave an account of the products of the farm on which he lives, near Plymouth creek, containing 117 acres of cleared land, as follows, viz.: Wheat, 400 bush. on 14 acres, amounting to, at prices sold, $420. Rye, 15 bush., on 1 acre, amount $12. Corn, 400 bush. on 15 acres, amount $260. Apples, 500 bush., amount $65. Hay, 50 tons, on 30 acres, amount $650. Oats, 500 bush. on 15 acres, amount $175. Poultry, 100, amount $30. Eggs, 150 doz., amount $22.50. Butter, 4000 lbs., amount $1160. Calves sold, 22, amount $154. Potatoes, 60 bush., amount $40. Pork, 3500 lbs., amount $210. The whole amount of products from the farm on which Mr. R. lives, was $3198.50. Mr. Reed has 23 very fine cows, some of which are worth from $40 to $50.

Mr. Henry Ortlip, who lives on a farm about a mile below Norristown, on the Ridgeroad turnpike, containing 48 acres of cleared land, and 4 acres of woodland, and keeps a public house, gave the folowing account of its products, viz.: Wheat, 100 bush., on 7 acres of land, amounting to, at prices old, $110. Rye, 50 bush. on 5 acres, amount $35. Corn, 120 bush. on 7 acres, amount $72. Apples, 0 bush., amount $10. Hay, 15 tons on 14 acres, amount $225. Oats, 224 bush. on 9 acres, amount $75. Poultry, 70, amount $28. Eggs, 100 doz., amount $14. Butter, 150 lbs., amount $37.50. Timothy seed, 1 bush., amount $3. Calves sold, , amount $10. Potatoes, 30 bush., amount $25. Pork, 1100 lbs., amount $66. The whole amount of the products from the farm on which Mr. O. lives, was $710.50.

Mr. Thomas Livezy, who lives on his farm, on he Germantown and Perkiomen turnpike, containng 105 acres of cleared land, and 11 acres of woodand, gave the following account of the products rom his farm, viz.: Wheat, 500 bush., on 16 acres, amount $550. Rye, on 1 acre, amount $20. Corn, 800 bush. on 15 acres, amount $480. Apples, 20 bush., amount $8. Turneps, 200 bush., amount $40. Hay, 70 tons, on 44 acres, $1050. Oats, 300 bush., on 6 acres, amount $100. Poultry, 100, amount $25. Eggs, 60 doz., amount $9. Butter, 400 lbs., amount $80. Cattle sold as products of his farm, amount $300. Clover seed, 7 bush., amount $35. Timothy seed, 3 bush., amount $9. Calves sold, 5, amount $25. Potatoes, 70 bush., amount $42. Pork, 2500 lbs., amount $150. The whole amount of the products from Mr. L.'s farm, was $2923.

November.

BY A FARMER'S WIFE.

I come, I come, with an aspect drear
To scatter the leaves, all wither'd and sere;
I blow o'er the landscape my frosty breath,
The plants to prepare for a wintry death.

Sad is my wail in the merchant's ear—
Visions of shipwreck and tempests appear;
He turns on his pillow, unable to sleep,
Or leans on his desk, in reverie deep.

Av'rice gloats o'er oppression and wrong,
The miser scowls, as I whisper, how long
Wilt thou, from the hireling, wages withhold?
The curse of the kind, corrupteth thy gold!

The lone orphans listen in sorrow,
As they bitterly think of the morrow—
To them I would say, this truth ye may heed,
A *Father* thou hast, a *Friend* in thy need.

Through the long nights and cloudy days,
I pipe to the weary farmer my lays;
They are not sad to the son of the soil;
I bid him enjoy the fruit of his toil.

The granary filled, the harvest all home,
His flocks and his herds forbidden to roam;
Hale sons and daughters encircle his hearth—
A king might exchange his crown for their mirth.

List to my song—remember the poor—
Winter, pale winter, is e'en at the door—
The blessings of those who share of thy bread
A halo of joy will be to thy head.

Maryland State Fair.

Hon. JOHN A. KING, President of the New-York State Agricultural Socity, and B. P. JOHNSON, Esq., Secretary of that association, attended the Maryland State Fair as delegates from this State. Mr. J. gives an interesting account of the show in the Journal of this city, from which we take the following:

This is the second exhibition of the society, and reflects great credit on its enterprising officers. The exhibition of cattle was remarkably good, and many of the animals will bear a comparison with any which have been shown in New-York, or in any other portion of this country. Col. CALVERT, the President of the Society, exhibited 29 full bred short horns, two Holstein or Dutch Cows, four Alderneys, several Ayrshires, one Spanish Cow, one Devon, and in all, some forty or more. Many of these animals were of unsurpassed excellence. His short horn cows are mostly prime milkers; several of them yielding, I was assured, from 25 to 34 quarts of milk daily. Their appearance indicated first rate dairy properties. He had two aged bulls, to whom I believe the first and second premiums were awarded. One of them, mostly red, a fine, noble animal—that I doubt not will leave valuable stock—several heifers from him were on the ground, and their color and form would satisfy even Devon men, who so much admire the red.

Col. Horace Capron, of Prince George's county, had the next largest lot of cattle. His were Short Horns, Devons, Ayrshires, working oxen, &c. Several of his animals were of rare excellence, both Short Horn, Devon and Ayrshire. His Bull "Valentine" received the first premium last year—and he had two very superior Devon Bulls—with all the fineness, style, and beauty of that breed. Among his Cows were some very extraordinary fine animals. His Oxen were Devons and equalled our best. This stock was for sale; and I noticed that many had been sold at prices varying, I believe, for the young and old, from $50 to $275. Col. Capron had three span of Mules on the ground that went far to obviate my objection to them. I now unite with Mr. Skinner in favor of these useful animals. They were large, active and vigorous animals, and sold readily for $900 the team.

There were a number of other exhibitions of fine stock, but I cannot particularise.

A. Clement, of Philadelphia, made a fine show of Short Horn and mixed stock.

Mr. Holcomb, of Delaware, fine show of Devons, &c.

W. G. Dobbin, of Maryland, exhibited a Holstein Bull and two Cows, imported. The bull was a very fine animal, color black and white, and the cows showed, I thought, valuable dairy properties, for which the breed is noted in Europe.

The display of long wooled Sheep was unusually rich. C. B. Reybold, of Delaware, had his unrivalled New Oxfordshires on the ground; one fat two year old weather was slaughtered; his weight not far from 190 lbs. There were several pens of Sheep—among others one from Virginia of the same breed as Mr. Reybold's, and of perhaps equal excellence. No fine wooled sheep exhibited; and but one pen of South Downs which I noticed.

The Swine were very superior: Chester county, Leicester, Delaware, Berkshire and Dutchess county breeds were the most prominent. J. Wilkinson of the Mount Airy School, near Philadelphia, formerly from Dutchess county, exhibited the Dutchess county breed, which were much admired. He sold three pairs of pigs 6 months old at $50 a pair to go to Virginia and Georgia, and I should think a cross from them would materially improve the swine of of the South. The show of poultry was very extensive and of many choice varieties. I was surprised to find that horses for which Maryland was once so distinguished, are now much neglected. Only some half a dozen were on the ground, and those of no very superior attraction.

The show of implements was large. The ladies' department rather limited. The dairy products represented by a few samples of butter, and the show of vegetables not large.

Gen. Taylor visited the grounds, Wednesday, Thursday and Friday, and expressed himself highly gratified with the entire exhibition. He mingled freely with the farmers, and showed by his inquiries and examinations that he was familiar with the implements necessary for the farmer, and that he was an attentive observer of the improvements going on in our country, to advance this great interest.

The receipts at the gate on the 2d day of the exhibition I understood were about $1,000; and I should think quite as much the last day.

Patent Hoops.

We noticed at the late Fair a specimen of hoops made on a new plan, and have received the following description of them:

These patent hoops were made by Heffron and Landphere's Hoop Machine. The process is as follows: The timber is first sawed into boards, then split by a buzz-saw into square pieces, then turned and slit by the machine, each square piece making two, half round hoops. Any tough timber, however large, can be thus converted into hoops of a most beautiful appearance. They set well by soaking in a vat of cold water; but hot water is better. The butter from one dairy has been packed in firkins bound with these hoops, and a portion sold in New-York at a price equal to the best "fancy hoops." The Ohio Fancy Flour Hoop, sells the flour thus bound at about five per cent. more than flour equally as good bound with the flat hoop; and it is confidently believed by the inventors of the Hoop Machine, and all whose opinions have been given, that it is destined to add from two to five per cent. to the immense quantities of flour packed in this State. The machine makes six in a minute, and they can be afforded as cheap as the flat ash hoop. These hoops were presented for examination at the State Fair at Syracuse, by D. S. Heffron, of Whitesboro, Oneida Co.

Challenge.

Rev. J. R. Smythies, a noted breeder of Hereford cattle, makes the following offer through the *Mark-Lane Express:*

I hereby offer to show four Hereford steers, whose ages shall not exceed two years and three months, and four whose ages shall not exceed one year and three months, at the next Smithfield Show in December, against eight shorthorns and eight Devons, of similar ages, for a sweepstakes of one hundred sovereigns for each lot; with this stipulation—that each lot shall have been bred by one man, and that they shall have lain at grass at least four months this summer, without having had anything but what they got there. But this is not all. I am willing to test their hardiness as a breeding stock, as well as their feeding properties. In order to do this, I propose to turn my two-year-old heifer, which gained the first prize at Norwich, into a pasture with the two-year-old shorthorn and two-year-old Devon heifer, which obtained the first prize in their respective classes, and let them remain there till the next meeting of the Royal English Agricultural Society at Exeter, next July, giving them nothing but what they can get, except a little hay from the 5th of November till the 5th of May; the heifers to be shown at Exeter for a sweepstakes of a hundred sovereigns each. But in case the owners of either of the heifers should object to the amount of the stake, I am ready to show them for nothing, if the society will consent to give a cup to the winner; and I do not know how they could lay out their money better, for this is a question of the utmost importance, and one that ought to be decided as early as possible, and can only be settled by the animals being brought into close contact in the way I propose. If any shorthorn or Devon breeder can point out a fairer way of testing their respective merits than the one I have proposed, I shall be ready to meet him in any way he likes. I am not nice to a shade how the experiment is tried, so that the animals are brought fairly into competition with each other. I hereby declare that I am ready at all times to produce Hereford beasts against any other breed in the United Kingdom, either as rearing or feeding stock, and to back my opinion.

Answers to Correspondents.

Work on Bees.—A. C. L., Fredericktown, Mo. Week's Manual contains much information which would be especially useful to a beginner in bee-keeping. A small work was published at Cincinnati several years ago, by Thos. Affleck, which we would recommend to your attention. Of larger works, Dr. Bevan's is much approved.

Ice-House.—S. M. N., New Marlborough, Mass. You will want an entrance to the ice-house from the outside, for convenience; but it may also be convenient to have an entrance connecting the ice-house with the cellar. The atmosphere of an ice-house is usually too damp to keep butter; a cool, dry room, perhaps adjoining an ice-house, would do better.

Barley for Feed.—The common two-rowed is usually most productive. There are several new kinds, as the Chevalier, the Black, &c., which have as yet been little tried here, but may prove profitable.

Common and Indian Buckwheat.—The Indian buckwheat is not saleable in market—it does not make palatable flour. As to the comparative value of the two kinds for *feed*, you can get the best idea by feeding a pig on one kind for a given time, then weighing the pig, and changing to the other kind for the same time, shifting, alternately, for a month, or longer.

Clay Soil.—O. J., Brewerton, Onondaga Co. Plow this soil as deep as practicable, in ridges, this fall. Drain off the water, by under-drains, and the soil will break down fine by the plow in spring.

American Silks—Mr. J. W. Gill, of Wheeling, Va. exhibited splendid specimens of various kinds of silk goods at the late show of the American Institute. They consisted of vestings, dress-silks, handkerchiefs, cravats, shirts and hose. Mr. G. has expended a large amount of money in the establishment of the silk business, and we were satisfied from what we saw of his operations several years since, that he would ultimately succeed. We are glad to learn that his returns afford a fair interest on the investment.

Notes for the Month.

COMMUNICATIONS have been received, since our last, from Arthur S. Copeman, A Farmer's Daughter, D. H. W., Enquirer, Dean, An Observer, Aquarius, Edgar M. Woodford, A Farmer's Wife, S. M. Norton, A Farmer, H. V. L., Old Suffolk.

BOOKS, PHAMPHLETS, &c., have been received as follows:—Descriptive Catalogue of Garden Seeds, cultivated and sold at the Wethersfield Seed Garden, by COMSTOCK, FERRE & Co.—The Scottish Ag. Journal for August—Report of the Commissioners of Patents for 1848, from Hon. WM. L. DAYTON, M. C.—A Basket of very fine Isabella Grapes, from Dr. UNDERHILL, Croton Point.

"NORTHERN SWEET" APPLE.—We have received from Mr. J. BATTEY, of Keeseville, Clinton county, N. Y., a specimen of this apple. We think it is superior in quality to any other sweet apple we have ever seen. It is of good size and fine form. It ripens in October and continues into November. We understand it originated in Chittenden county, Vt.

SUBSTANCE ON A PEAR.—Mr. J. S. DOANE of Kinderhook, has left us a pear on which there is a substance having the appearance of a species of fungus, but which is in reality the eggs of an insect—the hemirobius. This insect, in its larvæ state, is called the "lion of the aphides," a name significant of its habit of subsisting on plant-lice. In its perfect state, it is a beautiful four-winged fly, whose body is a glossy green. It lays its eggs, commonly, on the leaves of plants, which are affected by the aphis, and the young "lions" commence their slaughter as soon as they are hatched. They are provided with sharp and strong forceps with which they seize and hold the aphides till they can suck their juices. The manner in which the eggs are deposited is curious. The egg is covered with a viscous matter, and being in part protruded, is applied by the insect to the leaf; and as the fly withdraws its abdomen, the viscid matter is drawn out in the form of a thread, leaving the egg on the end, about half an inch from the leaf.

CASTOR-OIL BEAN.—A subscriber wishes information in regard to the cultivation of the castor-bean, and the processes necessary to fit the oil for market, the machinery required for pressing, &c. Will some one acquainted with the business give us an article on the subject?

EXEMPTION OF TREES FROM BLIGHT—In a visit to Mount Ida Farm, Troy, the residence of HENRY VAIL, Esq., in August last, we were struck with the healthiness and vigor of all the trees and shrubs. No "fire-blight" has ever touched the pear trees here, and the place has become noted for the production of the finest gooseberries, always unblemished by mildew. What is the cause of this exemption? is the question which naturally arises. In answer to this we will state some of the circumstances belonging to the location. The place comprises about forty acres, embracing a large portion of the top of a somewhat isolated elevation, several hundred feet above the river; thus ensuring a very free circulation of air. The soil is a slaty loam, generally rather loose at the surface, with a subsoil sufficiently open to allow the ready filtration of water. It has been highly manured with stable manure, which has been thoroughly mixed with the soil. We would suggest that the deep stirring of the soil, with the action of the ammonia of the manure, may tend to develop potash and other mineral elements in the earth, which are required by the trees; while the freedom from stagnant water in the soil and subsoil, prevents the formation of acids, which are prejudicial to vegetation.

Mr. Vail is devoting much attention to the culture of choice fruits, and his success in all departments has been highly satisfactory. The location, besides possessing the advantages we have mentioned, is one of the most beautiful in the country, commanding a splendid view of the surrounding scenery.

CROPS IN NORTH CAROLINA.—Mr. S. J. WHEELER, of Murfreesborough, N. C., writes: "Our crops of corn and peas are unusually good. Cotton only ordinary. The late frosts in the spring destroyed nearly all the fruit. We have a few apples; no peaches; figs and trees all killed to the ground. Otaheitan mulberry trees that were set out this spring *are injured*, but those that were set out one or two years ago *are every one dead*. Can you account for this?"

MULES.—The only specimen of this very useful kind of farm-stock at the State Fair, was exhibited by JOSIAH CLOYES, of Morrisville, Madison county. They were a pair of muscular animals, nearly fifteen hands high. Mr. C. has used mules on his farm for several years, substituting their labor for that of horses to a great extent, and he states that he finds the profit greatly in favor of the mules. He states the cost of keeping at two-thirds that of horses, and the mules do the same amount of work, ordinarily, that is done by the same number of horses.

SPANISH CATTLE.—At the Cattle Show of the Massachusetts Society for promoting Agriculture, held at Brighton, in 1828, there were exhibited several fat cattle said to have been the progeny of a Spanish bull. They were generally well shaped animals, and according to the recollection of the writer, were approved by the butchers. We have since seen at the Worcester shows, stock said to be descended from the same bull. Will some of our friends in Worcester county give us the history of the stock alluded to? Where did it come from, and what were its qualities?

FALL CROPS.—A large portion of the northern section of the country, embracing New England, a part of New Jersey, and a large part of New York, has been visited by a drouth of unusual severity. Excepting some light showers, of very limited extent, rain did not fall in sufficient quantity to sensibly benefit vegetation, from about the middle of June till the sixth of August. In the northern part of New York, in Vermont, and portions of New Hampshire and Maine, the drouth came on so early as to lessen the hay crop to the amount, in many places, of one-half. In other sections, the hay crop, so far as heard from, was good. Throughout a large portion of New York, the oat crop, is nearly ruined, and Indian corn will be cut short to a large amount; though we are unable to tell, at present, what may be the effect of the late favorable rains in resuscitating the corn and potatoes. Grass is already beginning to show the benefits of increased moisture, and the fall feed may compensate, in a good degree, for the deficiency of hay in some sections.

QUALITY OF MILK.—We have often remarked that it is the quality of milk, rather than the quantity, which gives value to the dairy-cow. Great astonishment is sometimes produced by statements of the large quantity of milk yielded daily, by some cows. But such statements are of little consequence. The most remarkable cows for the production of butter, have given but medium quantities of milk. For instance, the celebrated Sussex, or Cramp cow, which for several years made an average of 600 pounds of butter a year, gave, at the most, but twenty quarts per day; and the Oaks cow, which made 480 pounds of butter in a year, gave but sixteen to eighteen quarts per day. **John Holbert**, of Chemung, N. Y., states that he has found, by churning the milk separately, that *one* of his *best* cows will make as much butter as *three* of his *poorest*—all giving an equal quantity of milk. He states, also, that 100 pounds of milk drawn from his cows which give the richest milk, will make one pound more butter than 100 pounds drawn from the whole herd; and he adds, that there is more difference in the quality than in the quantity. His advice in conclusion is, that all dairymen look well to the quality of milk their cows give.

South Down and Leicester Sheep.—The two most popular breeds of sheep in England are South Downs and Leicesters. **C. Hilliard**, an experienced farmer and breeder, suggests to the Council of the Royal Agricultural Society, the propriety of offering a prize for sheep produced by a cross of these breeds. He uses the following arguments in favor of the proposition: "The South Downs do not come to sufficient weight of carcass in proportion to the quantity and value of the food consumed, and the Leicesters do not produce a sufficient quantity of lean meat to the fat. By an admixture of the two breeds—by putting a pure-bred South-Down ram to pure-bred Leicester ewes, I have, in the space of six years, established a breed that I find yield a better profit in feeding than either the South-Downs or Leicesters. The mutton is as fine as can be eaten, and the fleeces are of greater value than either South-Downs or Leicesters."

Stage for cutting Grass.—A writer on the scientific principles involved in the process of haymaking, lays down the following rules: 1. Grass must be fully developed before it is mown; if not, it will be found in its early stages to contain so much water as to be reduced, on drying, into so small a compass, that it will in quantity much disappoint the haymaker. 2. It must not be permitted to stand until its seeds are formed, much less ripe. All plants in arriving at maturity have their starch and sugar and gum in large quantities converted into woody fibre—a wise provision of Providence for enabling the stem to bear the matured seeds—and as sugar, gum and starch, are nutritive elements, it is desirable that these should be preserved, and hence the point for successful grass-cutting is that between the full development of the plant and before the formation of their seeds, in other words when they are in flower.

The proper drying and storing of hay should be strictly attended to. If it is put up with two much moisture in it, the fermentation is so violent that the hay is greatly injured in quality, and may be more or less consumed. But hay may be made too dry; for though a violent fermentation is to be avoided, a slight one is considered necessary to the full development of the best qualities of the grass; as there is little doubt that it is the vinous fermentation of the saccharine matter of the hay which renders it palatable to animals.

Cheese Factories.—In the Western Reserve, Ohio, where the making of cheese has been largely carried on for several years, a change of system has lately taken place to some extent. Certain men who are well acquainted with the manufacture of cheese, purchase the *curd*, unsalted, of their neighbors; and make it into that kind of cheese for which they find the readiest sale and best price. A single manufacturer sometimes uses the curd produced from the milk of several hundred cows. It is gathered every morning, by men who call at the different farms for that purpose. These large establishments are called "factories." The *Coneaut Reporter* notices some factories which it is stated use 3000 pounds of curd daily, making from twenty to thirty cheeses of from fifteen to thirty pounds weight each. Some of the cheese is sent to the English markets, some to the West Indies, and some to California.

Live Stock at Auction.—Attention is invited to the advertisement of Mr. **Blakeslee**, in this number.

Transmutation.—We have on hand several communications in reference to wheat changing to chess. While we desire to treat all our correspondents with civility, we do not think the publication of these articles would be generally interesting to our readers. We do not reject them because they express opinions contrary to our own, but because they throw no new light on the subject. All assume that because wheat failed to mature, more or less, where it was sown, and chess grew in its place, the wheat was transformed into chess! Now all we ask is the *proof* of this change. One correspondent says—"When I see wheat converted into chess, I must believe it." Aye, but *does he see* it? Does he absolutely know that *the chess* did not grow from chess? or did he "see" the miraculous conversion? We do not doubt the honesty of these statements—we admit that chess was found where wheat was sown—but we think the chess was produced, like every other plant, from seed of its own kind.

Shrunk Wheat.—The millers of Zanesville, Ohio, have published the following scale of prices, in view of the depreciated quality of wheat from rust, the present year:—

"Assuming that cleaned wheat, weighing 58, 59 and 60 pounds to the bushel, is worth 75 cents per bushel, wheat weighing

57	lbs.	would be	worth	72	cents.
56	"	"	"	69	"
55	"	"	"	66	"
54	"	"	"	62	"
53	"	"	"	58	"
52	"	"	"	53	"
51	"	"	"	48	"
50	"	"	"	42	"

For *white wheat*, 10 per cent additional on the above prices." Below 54 lbs. per bushel, superfine flour cannot be made, whence the rapidly diminished prices.

The Army Worm.—The Michigan Farmer states that twelve miles from Port Huron, on Black River, whole fields have lost their entire crops by the enormous numbers of these worms in their march from place to place, and that one tenant was actually driven from his house by the swarms which obtained possession.

Cheap Crop of Sweet Potatoes.—The Southern Cultivator contains a statement of Aaron Adkins, who raised 307 bushels of sweet potatoes—excellent food for cows at the South—on an acre of land, at a cost of about ten dollars, or about three cents per bushel. The potatoes, cut three inches long, were dropped into deep furrows three and a half feet apart, and a foot and a half apart in the furrow. They were covered with a plow; not hilled, nor hoed, but repeatedly cultivated with a shovel-plow, throwing the vines, when they became long, on one side, for one furrow, and on the other side for the next furrow. A small plow was used near the rows, and a larger one in the middle. They were plowed up out of the ground when harvested.

Plenty of Room.—According to the estimate of the General Land Office, the whole United States empire measures about two thousand million acres. If one half should be waste lands and forests, there would still be a thousand million acres. Integent agriculturists believe that each acre, under good management, will easily support its man, and if so, then the United States would support the whole of the present population of the globe.

Plums.—Several new plums have lately origina- ed in this neighborhood, some of which will proba- ly be found deserving propagation, as they pos- ess qualities which are not common. We shall nly notice a few at the present time, leaving oth- rs to be examined and decided on hereafter. One s in the garden of Messrs. E. & E. Dorr, of this ity. The tree has borne two seasons, and was so uch overloaded the present season, that the size f the fruit was somewhat diminished, and its qual- ty injured. It is a beautiful plum, of the yellow lass, with a thick bloom, and a deep blush on the pper side. Its shape resembles Coe's Golden rop, and it is about the size of Bleecker's Gage. ts quality is nearly first-rate. It begins to ripen bout the tenth of September, and it continued this eason till the middle of October.

Another fine new plum has appeared in the noted lum-garden of Mr. Isaac Denniston, of this city. he tree bore for the first time in 1847, and we no- iced the fruit in the Cultivator for November of hat year. Mr. D. has since given it the name of *adison*. It proves to be even later in ripening han we stated in our former notice. It may be aid to be in perfection at the present time—Octo- er 16th—though there is still a large proportion n the tree. In shape and size it resembles the mperial Gage, but its general color is lighter, and t is generally mottled or covered on its upper side ith bright crimson. All who have tasted it pro- ounce it first-rate—nearly equalling the Green age—of which it is probably a seedling.

Absorption of Rain.—It is believed that if soils ere sufficiently deep and fertile, nearly or quite ll the water which falls would be needed, and ut little would run off in streams. Hence, streams re found to diminish as population and improve- ent advances. It has been found that fifty-five r fifty-six inches of water falls annually at Nat- hez; and if forty-five inches be taken as the av- rage for the whole Mississippi Valley, which is vidently within bounds, it will give an amount alling on the whole valley, ten times greater than he water discharged at the mouth of the river.

To prevent Horses running off.—When the celanders ride two or more together on horseback, nd wish to dismount and leave their horses for any ength of time, they tie the head of one horse to the ail of the other, and the head of the second to the ail of the former. In this reversed condition they an make no progress, and if they move at all they an only go in a circle.

Watermelons after Tomatoes.—Prof. Turner riting to the *Horticulturist*, says—"My watermelons lanted where tomatoes had grown two seasons before, re of twice the size and vigor of growth of those grown the same way and on the same soil, side by side." He sks, "Is this a general result?"

Durability of Red Cedar.—We have heard f an old farmer, who, when asked how he knew hat Cedar posts would "last forever," said he had requently tried the experiment. Some may doubt is assertion, yet its lasting powers have been ound to exceed a long life-time. At the head of ne of the graves in "Old St. Mary's," Md., there tands a cedar slab, which, as the inscription indi- ates, was placed there in 1717, and is still perfect- y sound.

Prices of Agricultural Products.

New-York, Oct. 16, 1849.

FLOUR—Genesee, per bbl., $5.18a$5.25—Favorite western, $5.12½a$5.18—Fancy brands, $5.31a$6.25.

GRAIN—Wheat, Genesee, per bush., $1.21a$1 22—Red Missouri. $1.05—Corn, Western and Southern Yellow, 63½a66c.—Rye, 59½a60c.—Barley, 58½a61c.—Oats, 38a40c.

BUTTER—best, per lb., wholesale, 18a19c.—western dairy, 16a17c.

CHEESE—per lb., 6a6½c.

BEEF—Mess, new, per bbl., $10a$10.50—Prime, $7a$8 Old Mess. $11.50

PORK—Mess, per bbl., $10.50—Prime, $8.50a$8.69.

LARD—per lb., 6½c.

HAMS—Smoked, per lb., non-pickled, 6a6½c.

HOPS—per lb., first sort, new, 12½a13c.

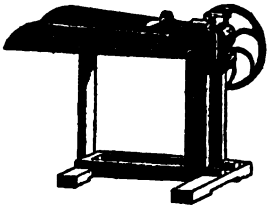
COTTON—Upland and Florida, per lb., 9½a11½c.—New Orleans and Alabama, 9½a12c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	35a37c.
" half blood do.,	30a32c.
" one-fourth blood and common,	27a29c.

Remarks.—The cotton market is buoyant. Western and State flour is very heavy—the demand mostly for the home trade. There is a fair trade in grain at quotations. Beef and pork are in better demand, though chiefly for the home market.

Hay Cutters, Corn Shellers & Vegetable Cutters.

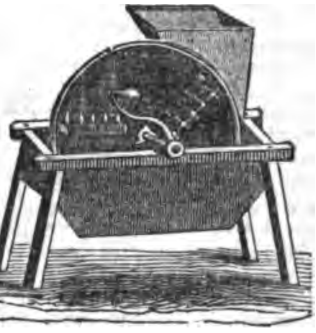


SPIRAL and Straight Knife and Gate Hay Cutters of Stevens, Ruggles, Nourse & Mason's, Hovey's and Rich's both for Hand and Horse Power. Also, Corn Stalk Cutters, for cutting, crushing, and making fine feed.

All the above are offered at the manufacturers' home prices, at wholesale and retail

CLINTON'S hand double and single hopper shellers. Smith's Patent cylinder power Corn shellers.

The above are warranted to be the best in use, and are afforded at the lowest prices.



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A large and general assortment of Implements of Husbandry—embracing every article required about the farm. Also, a good assortment of Grass, Grain, Field, Garden Seeds, &c., &c., constantly on hand at the Albany Agricultural Warehouse & Seed Store, Nos. 369 and 371 Broadway, Albany, N. Y.

Nov. 1. HORACE L. EMERY.

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☞ All orders to come free of postage and to be accompanied with the money for the numbers ordered

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These lectures are intended to be delivered in a form quite intelligible to those who never turned their attention to chemical studies. The great principles of Improved Agriculture will be illustrated and explained during the progress of this course in such a manner as to be understood by all. Tickets for the course $10.

Students in the laboratory have glass, chemicals, balances, and other apparatus furnished, and pay $20 per month. Analyses of minerals, soils, &c., made on reasonable terms.

For further particulars apply to either of the Professors.

New-Haven, Ct., Sept. 1, 1849.—6t.

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THE subscribers offer for sale this fall their usual assortment, viz: Apples, Plums, Pears, Cherries, Peaches, and Ornamental Trees.

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Duchesse d' Angouleme,
New Gray Winter Beurre,
Doyenne d' Ete, or Summer Virgalieu,
Columbia,
Bloodgood,
Vicar of Winkfield,
Beurre Diel,
Dearborn's Seedling,
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Sept 1.—tf.

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THE following works are for sale at the office of The Cultivator, No. 407 Broadway, Albany:

American Agriculture, by R. L. Allen, $1.
—— Fruit Culturist, by J. J. Thomas, $1.
—— Shepherd, by L. A. Morrell, $1
—— Poulterer's Companion, by C. N. Bement, $1.
—— Veterinarian, by S. W. Cole, 50 cents.
—— Herd Book, by L. F. Allen, $3.
—— Farmers' Encyclopedia, $4.
—— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
Domestic Economy, by Miss Beecher, $1.
Domestic Family Receipt Book, by Miss Beecher, 75 cents.
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50
Farmers' Companion, by Judge Buel. 75 cents.
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Employment Wanted.

ANY one who wishes to pay a good price for an active and industrious hand to manage a farm, one who has studied the principles and practice of modern farming, who can construct and repair buildings and implements, who is 27 years old and has a small family, address, *post paid*, CHARLES BETTS,
Burr Oak, St. Joseph Co., Mich.
Good references given and required. Oct. 1.—1t.*

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Seedlings.

A LARGE supply of Pear, Plum, Quince, and Buckthorn Seedlings, well grown and thrifty; also
Horse Chestnuts, one and two years old, for sale by
THORP, SMITH & HANCHETT,
Nov 1, 1849—1t. Syracuse Nurseries.

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Nov. 1—1t. Watertown, Ct.

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WE will supply orders for Peruvian, Patagonian and Prepared Guano, Bone Dust, Lime, Ashes, &c., all warranted fresh, and to be the kinds that are ordered, at as low prices as can be had in this city. We have a large supply constantly on hand.

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Oct 1—tf. 197 Water Street, New York.

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, DECEMBER, 1849. VOL. VI.—No. 12.

Close of the Volume.

THE present number completes the current volume of the Cultivator, making the sixth of the new series, and the sixteenth from the commencement. The work has been so long established, and the public have been so familiar with its character, that it seems unnecessary to expatiate on this point.

The year which is just closing, has brought with it satisfactory evidence of PROGRESS in the "art of arts;" and we may confidently say, that at no former period has the world at large been so thoroughly impressed with the paramount importance of those pursuits, from which the food and clothing of the human race is derived. At no former period has so large an amount of practical, mental talent been devoted to the encouragement of the great interest of agriculture, and to the examination of the principles which form its foundation. The farmers of our own country are awakened; and having discovered the importance of their position in the frame-work of society, they are resolved on possessing the intelligence which shall enable them to discharge their civil and political duties with honor to themselves. In relation, also, to the practice of their vocation, a large proportion of the class have become convinced that "knowledge is power." Hence the greatly increased spirit of inquiry. The bugbear of "book-farming" has lost its terrors; men have the courage to read; by an enlarged course of reading, and a habit of observation, they are enabled to discriminate and apply understandingly and profitably. To extend the means of knowledge, to inculcate correct theory and sound practice, to furnish useful ideas and suggestions, has ever been, and will continue to be the aim of this journal.

We shall enter on our next volume with increased facilities for carrying out the design of the work, and have made arrangements which we think will impart to our pages additional interest and value. Among the most important of these, we have the satisfaction to announce that Prof. NORTON, of Yale College, will furnish a series of articles on the Science and Practice of Agriculture. Prof. N. is already so well known to our readers, that it is unnecessary for us to commend him for the sound, practical common sense which he brings to bear on this subject.

We embrace this opportunity to renew the expression of our hearty thanks to our numerous CORRESPONDENTS, in every section of the country, for their very liberal contributions to our pages, showing the results of their practice and observation, by which we have been enabled to garner up a storehouse of facts and suggestions of immense value to the farmer,—to our AGENTS, and POSTMASTERS generally, for their persevering and successful efforts to promote the circulation of our journal—efforts made too, in most instances, without other reward than that which arises from a consciousness of having done what they could to dissipate existing prejudices, by causing those whom they have induced to become subscribers, to READ, REFLECT, and ACT intelligently.

As the annual subscription of our work is too small to admit of our keeping accounts with individual subscribers, we are compelled to continue our practice of discontinuing all subscriptions at the end of the year; and hence the necessity of an annual appeal to the friends of "*The Cultivator,*" to renew their efforts to promote its circulation. We have prepared a PICTORIAL CULTIVATOR, containing more than ONE HUNDRED ENGRAVINGS, a copy of which will be sent to every subscriber to our next volume. We shall also send a copy of it, with this number, to each of our Agents,—believing that by its exhibition many will be induced to subscribe, in order to obtain this beautiful sheet, which is intended as a NEW-YEAR'S PRESENT for all our subscribers for 1850.

As an inducement to greater exertion on the part of those disposed to act as Agents, the following PREMIUMS will be paid, in Books, or in Implements or Seeds from the Albany Agricultural Warehouse, to those who send us the largest lists of subscribers for our next volume:

1. To the one who shall send us the largest number of subscribers to the CULTIVATOR for 1850, with the pay in advance, at the club price of 67 cents each, previous to the 20th of March next, the sum of FIFTY DOLLARS.
2. To the one sending us the next largest number, the sum of FORTY DOLLARS.
3. To the one sending us the next largest number, the sum of THIRTY DOLLARS.
4. For the next largest list, the sum of TWENTY DOLLARS.
5. For the next largest list, TEN DOLLARS.
6. For the FIVE next largest lists, each FIVE DOLLARS.
7. For the TEN next largest lists, each THREE DOLLARS.
8. A copy of Thomas' "AMERICAN FRUIT CULTURIST," price one dollar—a very valuable work, just published—to every Agent who sends us Fifteen subscribers and $10, and who does not obtain one of the above prizes.

LUTHER TUCKER.

National Board of Agriculture.

Editors of the Cultivator—I recently prepared a paper for *The Cultivator*, upon the subject of the establishment, in the National Department of the Interior at Washington, of a Bureau of Agriculture, for the Promotion of the great interest of Agricultural Improvement, in this Union. I submitted my communication to the consideration of a few friends, who advised me to lay the matter before the Legislature of Vermont, now in session, for their approbation and recommendation to the General Government. I did so; I am happy to inform you that it met with universal favor. The paper has assumed the form of the following Report, which, together with the accompanying Resolutions, were passed by the General Assembly of Vermont, as you will see below. F. Holbrook.
Montpelier, Vt., Oct. 18, 1849.

Report.

The founders of our government were desirous fot the organization of a Home Department, devoted to the fostering and encouragement of Agriculture, and other Industrial Arts; but it seems that for want of proper persons to organize and manage such a Department, it was laid aside.

At a later period, Washington recommended an organization, entitled "A Home Department of Agriculture." His conceptions upon this subject,—like everything else emanating from his practical far-seeing mind,—are exactly to the purpose, comprehending, more or less directly, about all that need be said in its favor. They are as follows:—

"It will not be doubted that with reference either to individual or national welfare, Agriculture is of primary importance. In proportion as nations advance in population, and other circumstances of maturity, this truth becomes more apparent, and renders the cultivation of the soil more and more *an object of public patronage.* Institutions for promoting it grow up, supported by the public purse, *and to what object can it be dedicated with greater propriety?* Among the means which have been employed to this end, none have been attended with greater success than the establishment of Boards, composed of proper characters, charged with collecting and diffusing information, and enabled by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to enterprise and experiment, and by drawing to *a common centre*, the results every where, of individual skill and observation, and by *spreading them thence over the whole nation.* Experience has accordingly shown, that they are very cheap instruments of immense national benefits."

The methods of agriculture pursued by our fathers, in a new country, with a virgin soil and a sparse population, were, perhaps, necessarily rude and improvident; but with a rapid, and unprecedented increase of population, improvements in tillage have not advanced with corresponding steps, or generally speaking, been of long standing. By no more than a-half century of bad cultivation the soil of the older States has become either entirely run down or greatly impoverished of fertility; and insects, blights, noxious weeds, &c., the usual attendants of imperfect tillage, have increased and become accumulated to an alarming extent.

But the evil does not stop here. Too many of our intelligent, enterprising young men,—observing the sad condition of the soil, and trained to false impressions,—suppose that the agricultural profession, instead of being an open field for the efforts of science to improve, is but an arena, fit only to be occupied by the illiterate and unenterprising, under the guidance of blind tradition. They accordingly press in masses into other callings, filling them to overflowing, and leaving the "Art of Arts," to its fate.

The same process of deterioration which has been so nearly completed in the Atlantic States, is now going on at the West. Although nature, by a long and a most liberal process, has endowed the lands of that section with a fertility elsewhere unknown, still they can be impoverished by the hand of man. The gradation to the same climax which has obtained in the older States may be slower, yet, in the nature of things, it must be sure. Many of the occupants of those now generous soils, under the same mistaken impression that they are inexhaustible, which possessed the first settlers of the more fertile tracts of the Eastern States, will probably live long enough to find that, under a constantly depleting and careless husbandry, what has been done can be done again.—These remarks are of course subject to exceptions; but they are still quite too generally true.

While this rapid destruction of fertility has been going on among us, several of the States of Europe have been as rapidly advancing in productiveness. There, Agriculture is fostered and encouraged by Government; men of the first attainments, and in the highest walks of life, devote their time and talents to its improvement; the lights of several sciences have been shed upon it; lands, under the cultivation of ages previous, have been so changed within sixty or seventy years past, by a judicious rotation of crops, and a system of manuring adapted to the soil and the crop, as to increase three-fold in productiveness; thousands of acres of wet lands, heretofore of little or no value, have been drained, and are now under profitable cultivation; agricultural schools and colleges have been established; and the breeding of agricultural animals has been carried to so high perfection in England and Scotland, that any other breeds in the known world may be improved by a cross with them.

It may be said that such high cultivation cannot be profitable here. Neither can we afford to pursue *our* exhausting system of cultivation much further; for the decreased and decreasing crops will not remunerate our labor. If the state of things in our country will not warrant high farming, to the extent to which it is now carried in the countries spoken of, we certainly are warranted in the employment of far more enlightened and correct principles of tillage than are now common.

It has been well said, that "a prosperous agricultural district is not without patriots to defend it;" and it is undoubtedly true, that a high state of intelligence and scientific knowledge among our farmers, would conduce, more than anything else, to the stability and perpetuity of our Republic, and to the rapid and full development of its vast agricultural capabilities. We may truly say, in this connection, that "every accession which man gains to his knowledge, is also an accession to his power; and extends the limits of his empire over the world which he inhabits."

About three-fourths of the population of our country are engaged in tilling the soil. Legislation to promote the prosperity of this interest, directly benefits the greater portion of the people; and indirectly, but not less surely, the remainder also. Now our legislators and others have not been wanting heretofore in eulogy upon the antiquity, digni ty, importance and pleasures of agriculture; but where has been that fostering care which would seek to encourage and promote it? Where have the farmers been who would demand for the cultivation of the soil, that conspicuous place to which it is so justly entitled?

But we are happy to observe that an improved sentiment is becoming prevalent. That "Agriculture *is* of *primary* importance;" that our nation has *already* "advanced in population and other circumstances of maturity," to that position which "renders the cultivation of the soil an object of public patronage;" that there is no "object to which it can be dedicated with greater propriety;"—these truths are gradually making their way into the minds of intelligent, thinking men.

We have, at length, a Home Department; and the question presents itself—Can it, and will it do anything for Agriculture? It can, and we trust that it will. The politicians *may* seek to make it an instrument for the furtherance of party; and with the bug-bear of constitutional objections, they *may* tell us that nothing can be done for Agriculture under this Department. But let the farmers, moving in a mass, call loudly for a Bureau of Agriculture, with proper and suitable patronage from the Government. Let it be managed by "proper characters," selected with reference to their fitness for, and devotion to promoting agriculture. They should be men above political contamination; and having a love of science for its own sake; and keeping constantly in view the one great object which they were placed there to promote, they would not be induced to give up to party what was meant for mankind.

A Board of Agriculture, thus "composed of proper characters, charged with collecting and diffusing information, and enabled by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to enterprise and experiment, and by drawing to a common centre, the results, everywhere, of individual skill and observation, and by spreading them thence over the whole nation," would soon be found to be "a *very cheap* instrument of immense national benefits."

1. This Board might be in correspondence with scientific men in all parts of our country, and with Boards of Agriculture in all foreign countries,—thus drawing to a common centre, and from thence spreading broadcast over the land, all new facts and improvements of utility, all valuable suggestions, derived from the improvement and new lights of the various natural sciences which are intimately allied to Agriculture.

2. Proper premiums might perhaps be offered to stimulate ingenuity, in the invention and production the most valuable farm implements and machines; and by awarding to those which, upon proper test, were found best to answer a desired purpose, competition, and an ambition to excel, would be excited to the highest degree.

3. Persons in the employment of our government abroad, might be directed to collect and transmit to the Department, those new or improved seeds, fruits, plants, animals, implements, &c., which were deemed desirable. As it would be part of the business of this Board, to institute extensive inquiries into the utility of introducing, for cultivation among us, the various valuable productions of other countries; and as the great range of latitude, of soil and climate, which our country embraces, undoubtedly admits of cultivating the products of almost every other country; we may reasonably suppose that a proper effort, in this direction alone, would be attended with very important results.

4. Premiums might be offered for the most able essays and the most satisfactory experiments to elucidate vexed questions and undeveloped principles in Agriculture—if deemed proper and desirable.

5. Extensive inquiries might be instituted, into the habits of Insects troublesome to cultivation, and the best method to exterminate them, or prevent their ravages. As the nation "advances in population, and other circumstances of maturity," it becomes more and more an object, pecuniarily, with our cultivators, to raise many sorts of fruits, and tender plants, comparatively unimportant at an earlier period. Now it is a fair estimate that one-half the productions of man, of this description, go to feed the insect world. Indeed, of some sorts, in some seasons, they take the whole. The subject of Entomology is vast and inexhaustible; it requires such extensive, and yet particularly minute and often microscopic investigations, that the efforts of ordinary associations of men can avail but little. But it is believed that a National Board of Agriculture would have resources, peculiar to itself, that might effect important results. Its inquiries might be very extensive, drawing in contributions from individuals and societies, in every quarter, the sum total of which would be highly useful.

6. The various state and county societies throughout the land, might be in correspondence with the Department,—thus receiving and imparting information upon these and other subjects.

In short, in a hundred ways, such an organization might forward the great interests of Agriculture. Indeed, we may conclude, that no other establishment could parallel this, as a promoter of the interests, not exclusively of either section, but of the whole country.

The advocates for this movement may, by some, be called enthusiasts. They are so; for the magnitude and importance of the thing very properly awakens them to enthusiasm. It is right that our own State of Vermont should be a foremost, a zealous pioneer in this business. Our people are an agricultural people; and they are awake to those measures which will foster and promote this commanding interest. Other States will join us in endeavoring to form an organization so desirable; and thus the great sentiment of Washington, that "the power of the nation alone can carry out their high thought," will be realized.

1. *Resolved*, That the General Assembly of Vermont earnestly recommend the establishment of a Bureau of Agriculture, in the Department of the Interior at Washington, whose province it shall be to superintend and promote the great interest of Agricultural Improvement in the Nation.

2. *Resolved*, That the Governor is requested to transmit a copy of the foregoing Resolutions, and of the accompanying Report, to the President of the United States, to the Secretary of the Department of the Interior, to the Governor of each State of the Union, and to each of our Senators and Representatives in Congress, to the end that the attention of Congress, and of the several State Legislatures, may be properly invited to the propositions embraced therein.

3. *Resolved*, That the Senators and Representatives of this State, in the Congress of the United States, are hereby requested to use their influence to procure the necessary legislation, by Congress, for the speedy establishment, on a firm and permanent basis, of a Bureau of Agriculture, as suggested in the first foregoing Resolution.

Agricultural Notes.

Farming, &c., in Oneida County.

After the close of the Oneida County Fair, we had an opportunity of calling on several of the farmers and horticulturists of that section. We regret, however, that ill health rendered our examinations much less extensive than we had designed.

The settlement of this county was commenced about sixty years since, though the principal advance has been made since the beginning of the present century. Previous to the revolutionary war, it was chiefly a dense wilderness, where civilized man had no abiding place, except at a few fortified stations. Now, it has a population of about 100,000. This great change has taken place within the observation of many who still live to express their astonishment and admiration at what their eyes have witnessed.

By the kindness of Mr. E. B. Lucas, we were introduced to several gentlemen at Clinton. This neighborhood has long been noted for its apple-orchards. In fact, before the country came into the possession of the Whites, the Oneida tribe of Indians planted many trees in the neighborhood of their villages. We were informed by Ira S. Hitchcock Esq., of Oneida Castle, that these people had at one period upwards of 200 acres of land devoted to apple trees, and that the first settlers were in the habit of obtaining their apples and cider from the "Indian orchards." Rev. Mr. Kirkland, an early missionary among the Oneidas, planted a large orchard on the fine farm near Clinton, where he finally located himself. Many of the trees are still in a productive state.

The first settlers here, who came principally from the New-England states, soon discovered the favorable nature of the soil for the production of fruit, and propagated, extensively, the best varieties of apples and pears then known. Many years did not pass before the products of their orchards constituted an important part of the income of many farmers. The once celebrated "Goodsell orchard," has produced, we were told, upwards of $1000 worth of apples in a year. Mr. G. Butler, who is well acquainted with the apple-trade, states that 15,000 barrels of winter apples have been shipped from this place in one year.

The first orchards here were planted mostly on the alluvial lands along the Oriskany creek, and though they succeeded well, it has since been ascertained that the sides of the hills or ridges, where the subsoil is not surcharged with water, are as good for trees of all kinds as the alluvions. Not only apples and pears, but plums, peaches and grapes, flourish well here. Mr. Lucas showed us several kinds of peaches, one of which, a yellow-fleshed seedling, which originated in his garden, is a good variety, (pronounced so by all who have examined it,) and will probably come into extensive cultivation in this section. Mr. L. has a fine young orchard of pears, mostly on quince stocks, which appear healthy, and will doubtless soon give a good return for the attention bestowed on them.

Mr. George Parker is giving considerable attention to the culture of fruits. He showed us beautiful specimens of the Bartlett, and other choice varieties of the pear, very fine apples—the Sapson, (or Sops-of-Wine,) Baldwin, Hubbardston-Nonsuch, and others—and several kinds of grapes.

Mr. John C. Hastings has been actively engaged in horticulture for several years—has established a nursery here, and has been instrumental in disseminating a taste for the culture of fruits. For the purpose of testing varieties, he has had access to the fine garden and grounds of his father, Dr. Hastings, where he has fruited many new kinds of pears, apples, &c. In this garden he showed us a White Doyenne (Virgalieu) pear tree, the fruit from which, in 1847, sold for over fifty dollars. Mr. H. showed us a handsome specimen of Stevens' Genesee pear. It a large and good kind. He had, also, many esteemed varieties in various stages of ripeness. He has made many trials in cultivating different kinds of grapes, in the open air. He finds the Isabella and Catawba rather uncertain in ripening, without protection, though they bear abundantly, and the same may be said of several imported kinds. He has tried many of our northern native grapes, and has more kinds of these than we have before found in any collection. Some of them are decidedly good, particularly a variety called the Clinton grape. He received the first preminm at the last State Fair, for the best collection of native grapes. Mr. H. intends to raise vines from the seed of different kinds, in order to test the results of hybridization.

From Clinton, we went to Waterville, in the south part of Oneida county. This is a thriving place, and is becoming of considerable importance for its manufactures. We could not take particular notes in reference to the different branches of business; but by the politeness of Mr. S. J. Goodwin, were favored with a general view of the town and vicinity. Mr. G. is engaged in making woolen cloths. The factory—(that of Messrs. Bacon & Goodwin)—uses 120,000 lbs. of wool annually.

We called for a short time, on Mr Charles Palmer. We first took a glance at his fruit garden where he showed us many fine kinds of pears—several on quince stocks—and all in a healthy and flourishing condition. Here was also, a choice collection of plums. The varieties not out of season, were in great perfection, both as to appearance and quality. Several trees of Coe's Golden Drop were heavily loaded. A tree of the Blue Imperatrice made a splendid appearance, being filled to just the right degree with this beautiful late plum.

Mr. P. cultivates *hops* and *teazels* on a large scale. His average crop of the former is 16,000 lbs. The yield per acre is from 1,200 to 2,000 lbs. His crop the present year has been sold for 12½ cents per lb. There are several other hop-growers in this neighborhood. Mr. Gurdon Avery has 20 acres, and his crop was stated at 30,000 lbs. The labor of picking is performed chiefly by females, who are paid 25 cents per day, or one shilling per box. Several hundred hands are employed by the different growers during the "picking season," which lasts two or three weeks.

Mr. Palmer has 15 acres of teazels annually. They are all sold in Boston. His buildings and arrangements for curing the teazels, are ample and complete. The ground where the teazels are cultivated is made very rich by the application of large quantities of manure, which is obtained from several distilleries where many cattle and hogs are fattened. The teazels are planted in rows, which are alternately, abont two and a-half and five feet apart. In the widest spaces, corn is planted in drills. The ground is kept perfectly clean with the cultivator and hand hoe. The corn yields from fifty to sixty bushels per acre.

The teazels require two seasons to come to maturity, and the principal object of the corn is to afford protection to the teazels during winter. The ears when ripe, are picked from the stalks, which have been previously topped, and the stalks are left standing. They break the force of the wind, so that the snow lies equally over the ground, affording a covering for the teazels, and protecting them against the fluctuations of temperature. The next spring, the stalks are cut down, carried from the field, and added to the manure heap. The teazels are cut the second year, about mid-summer. The stems and branches are then thrown into rows and burnt; and the ashes spread over the ground, which, after being thoroughly plowed is sowed to wheat, and often gives a yield of forty bushels to the acre. The grass which follows is usually very heavy. Mr. P. has gone over about forty acres in this way, and has brought it into a very high state of fertility and productiveness.

He cultivates several kinds of beans, some of which are grown among the teazels. We understood they were marketed in Boston, and ultimately sent out of the country.

Mr. P.'s business appears to be conducted with great regard to *system* and *neatness*, which ought to be recognized as the cardinal principles of farming in general.

From Waterville we passed over to Vernon. This is more particularly known as a grazing and dairying neighborhood, though the soil is in some instances well adapted to grain crops. Many of the farmers here have long been distinguished for their enterprise and success in various departments of husbandry, and a large proportion of the premiums of the State Agricultural Society are annually claimed from among them. Several of the officers and leading members of the county society reside here; and it is not too much to say, that among those who have prominently aided in bringing the county of Oneida to her present high position in respect to agricultural improvement, will be found the names of HITCHCOCK, CHURCH, MARSHALL, INGERSOL, CASE, WRIGHT, and others of this town.

Besides the interest taken in the state and county societies, the people of Vernon have a town organization, the object of which is the improvement of agriculture, horticulture, and domestic manufactures. An annual exhibition is held in the month of October. We were informed that there is generally on these occasions, a large turn-out of live stock, and a liberal display of the products of female labor.

Our first call here was at the residence of Gen. L. T. MARSHALL. His farm consists of 230 acres. He keeps thirty cows; the milk is devoted to making cheese, except such portion as is necessary for making the butter required for the family. The average weight of cheese per cow is 400 lbs., and it is sold, green, at $6 per hundred.

Gen. M. has an excellent stock of hogs. They were produced from various crosses; but having, some time since, obtained the points and qualities desired, he has kept them so without change. They are small-boned, but will weigh at sixteen to eighteen months old, 300 to 400 lbs. each, and will fatten at any age.

Gen. M. has commenced the culture of fruit, and has a fine collection of young trees of various kinds. He is also commencing the cultivation of teazels.

Mr. S. H. CHURCH has 170 acres in his farm. He practices a mixed husbandry—has always raised more or less wheat, notwithstanding the casualties to which this crop has been exposed in this region, and has seldom failed of getting thirty bushels to the acre—once or twice as high as fifty bushels per acre. Barley has been considerably cultivated, and has yielded from forty to fifty bushels per acre—oats fifty bushels. His wheat sown the present autumn appears very promising. He attributes his success in wheat culture, to the thorough preparation of the soil, and sowing clean seed.

Mr. C. keeps 300 Saxon sheep. The reputation of this flock has long been deservedly high; and to this and the flock of S. B. CROCKER, of Vernon, have been awarded many of the premiums on Saxon sheep by the State Agricultural Society. We believe Mr. Church took nearly all the first premiums in this class the present year. The flock shows evidence of skill and care in breeding and managment. The sheep appear healthy, of very uniform size and shape, and very superior quality of wool. The average weight of the fleeces for several years, has been two and three-fourths pounds, thoroughly washed. He has two years' clip on hand—that of 1847 sold for 63 cents per pound.

Mr. C.'s cattle are a cross of the Devon with the common stock—some being nearly full blood Devons. We have spoken of his oxen, exhibited at Syracuse. At Hampton we saw them tried at a cart, with a weight of over two tons, and their performance attracted the admiration of all. Without a touch of the whip, but merely by the word of the driver, they took the load up a steep hill, where the felloes of the wheels were nearly buried in the soft ground. They appeared to understand exactly how the work was to be done, and they performed it with resolution and courage.

Mr. C. C. CHURCH has 193 acres of land. He devotes his farm mostly to grass—keeps 30 cows, and rears six or eight calves yearly. His cows are devoted chiefly to making cheese, and they average about 400 lbs. each. He has six full blood Devon cows and heifers, obtained from Mr. HURLBUT, of Connecticut. Some of them are fine specimens of that beautiful breed, and if bred to bulls of the proper quality, will, we venture to say, produce stock which will not suffer by any comparisons.

In Mr. C.'s garden we were pleased to find a handsome collection of various kinds of fruit: Sweet water, Isabella, and several good kinds of our native grapes; plums, pears and peaches. We were informed that most of the peach-trees were from seed planted by Mr. Church's mother—a lady now seventy years of age, still actively interested in all the improvements of the day. One of the trees produces a peach which is highly deserving of notice, being of a quality seldom equalled. The tree is now five years old, and has borne, more or less, two seasons. The seed was obtained from Baltimore. The fruit ripened this year, about the first of October. We hope Mr. C. will take measures to have it brought before our pomological associations another year.

Mr. IRA S. HITCHCOCK, of Oneida Castle, has a farm of 225 acres. The ancient village of the Oneida Indians covered a portion of this farm, and in one of Mr. H.'s fields, was the residence of the celebrated chief, SKENANDOAH. The soil, for the most part, may be called an old alluvion, lying on the banks of the Oneida creek. It is a friable loam, easily cultivated, and naturally good for grain crops. The Indians raised their best corn here, and the capacity of the soil for the production of that grain, is still shown by the large crops which Mr. H. annually obtains. A field of his containing nine acres appeared to be considerably the heaviest of any we have seen this season. Mr. H. told us that he generally had seventy-five bushels to the acre.

He has been in possession of the farm twelve years. When he bought it, it was generally thought to be "run out." It had been plowed about three to four inches deep. His first operation was to break up about forty acres of it, six to seven inches deep, which was sown to wheat, and yielded twenty-five bushels to the acre. Excepting for a few years when the crop has been injured by the midge, he has since obtained an average equal to this.

The means of improving the farm have not been extraordinary. The manure has been derived chiefly from the live-stock kept on it. Muck, from a peat bog, has been used for compost, and to absorb the liquids of the stables and barn-yards. The principal barn for stock has a cellar under the whole of it, into which the manure is thrown; and Mr. H. is satisfied that this is far the best and most economical mode of keeping stable manure. All the excrements, liquid and solid, are here saved, and may be kept without loss till wanted.

Besides the corn consumed on the farm, Mr. H. sold, last year, 500 bushels, and between 500 and 600 bushels of oats. The latter grain usually yields fifty bushels to the acre, and the price obtained at the barn, has for two or three years been forty cents per bushel. Corn is usually worth fifty cents per bushel, and wheat one dollar.

Mr. H. has this season commenced the manufacture of cheese. Thirty cows are kept on the farm. They will average 400 lbs. cheese each; which has been sold at a month old, at $6 per hundred. At this dairy, as well as most others we visited, the milk is heated by steam. A small boiler is used for generating the steam, which is conducted by pipes to the vats containing the milk. The milk is placed in tin vats, which are placed in wooden vats, so much larger than the tin ones as to leave a space of about two inches all round. This space is filled with water, and the steam is conducted into it. A boiler noticed in our October number, made by J. H. Bushnell, Utica, is thought by some to possess advantages over those in common use.

Mr. H. has made some observations in regard to the application and effect of animal manures, which are worthy of notice. He has spread it on the surface, and has plowed it in at various depths, for various crops. The conclusion to which he has come, is, that the more thoroughly it is mixed with the soil, the better. When it is first applied, therefore, he prefers burying it with a shallow furrow; and when the manure is rotted, or the next time the ground is plowed, run the plow to the usual depth—not less than seven inches. This mixes the manure with the whole of the soil that is stirred.

We hope at some future day to be able, under more favorable circumstances, to make a more thorough examination of the agriculture and resources of Oneida county. At present we can only tender our thanks to the officers of the Agricultural Society of the county, and various individuals, whose many favors will be long remembered.

Seeding Grass Lands.

Eds. Cultivator—I read in the October *Cultivator*, an article on "Seeding Grass Lands in Kentucky." As more *light* was asked upon the subject, I thought a few remarks would not be out of place. And first, seeding grass lands in Connecticut, and in Kentucky, may be two things, as very different treatment may be required in the two States. Second, it has been the practice, more or less, in this State, to seed down grass lands in the spring; with oats, barley or spring wheat, but more commonly with oats; and grass seed sown in this way generally takes well.

But there are some objections to this method of seeding. On lands that are intended for mowing, oats or barley will often grow very heavy; and before cutting time, much of the straw will lodge or lie down, and in this case the young grass is very apt to be killed out. Then, if a sudden and severe drouth set in early in the season, the grass very often proves a failure.

Of late years, we have been more inclined to fall seeding on winter grain, as more certain of a good *catch* for timothy and red-top. And I am not aware, even with our cold winters, that grass is in much danger of killing out, if it has once become well set. One advantage of fall seeding is, that you can mow a crop of grass the next season, after the grain crop comes off; sometime in the month of August. This is not often the case, when seeding is done in the spring. Winter grains, such as wheat or rye, very seldom lodge, if they stand ever so heavy on the ground, so that the young grass will not be injured in this way. This, probably, is owing to the length of time the stalk is growing, as the straw is stiffer, and has more *silica*. than those straws which have a rapid growth. Some farmers have had very good success in seeding to grass with buckwheat in the summer, which in some instances may do very well.

A very good plan is practiced in some parts of Massachusetts, where meadow lands are rather moist, and are intended to be kept in grass without other cropping. Sometime in the month of August, the ground is very nicely turned over with a plow, the ground rolled down, and, if to be had, a good dressing of compost is spread on; then the grass seed is sowed and harrowed in evenly with a fine-tooth harrow; the whole then to be made smooth with the roller. The next season, a fine crop of grass can be cut; and managed in this way, the land can be kept constantly in grass. I do not approve of the plan of sowing grass seed alone, without grain, unless it be in the way just mentioned, as in this case, there would no weeds spring up, from the inverted sward, to hinder the young grass coming to perfection. But to sow grass seed alone on mellow or stock ground, would be to just give up the land to weeds and foul grass at once. I think it altogether preferable to sow with some of the small grains.

As to the amount of seed to be sown on an acre, there can be no certain rule laid down. Generally, however, light dry soils need more seed than moist soils. Thick grass is of better and finer quality, than coarse and large, of the same kind. I have just now (Oct. 15,) seeded down about two acres with wheat, with a bushel of red top, and a half bushel of timothy seed, mixed together and sown in breadths of about six to eight feet to a cast, each way of the field, or at right angles. This is three pecks of seed on an acre, and if it have a good catch, it will give a good burden of grass next season, for mowing. Where land is in good heart, when it is laid down for mowing, enough clover will come in without sowing any. If the land is intended for pasture, it is a good plan, to sow clover on a light snow in March, as it generally takes well sown in this way. In harrowing in grain and grass seed we do not like bush or brush harrows for covering the seed, as they are apt to draw the ground into heaps, and leave the seed uneven. But the light triangular harrow, of the Geddes pattern, with thirty teeth, is just the thing for covering grain and grass seed; the surface to be afterwards made smooth with the roller.

When Mr. Sanders advises his Kentucky friend to avoid sowing red top, as being the worst of all the cultivated grasses, it is presumed he meant the advice for his own State, and so far it may be all very well, for aught we know. But in New England, red top grass is considered one of the best of all the cultivated grasses for farm stock. Timothy is a capital grass, and when mixed with red top, and a slight sprinkling of clover added, it is better for market than either red top or timothy alone.

As to fall plowing for spring crops, I am of the decided opinion of the writer in the *Louisville Journal*, that it is a great benefit on many soils, especially on old swards, and heavy loams or clay lands. Light clover swards may do as well to plow in the spring. Trench plowing as mentioned, is a very good operation, when well done, to mix and deepen the soil. But at the north, subsoil plowing is taking the lead, as by the latter operation, the subsoil is not brought to the surface, but only stirred up and left in the bottom of the furrow. L. DURAND. *Derby, Ct., Oct.* 20, 1849.

Importance of Reading and Study.

Though farmers may always find more or less time to devote to reading and study, winter is, more particularly, from the leisure it affords, the season for this purpose. The crops having now been secured and the various matters requiring constant attention, disposed of, the mind of the farmer is left free for the consideration of plans for future operation; and that he may act understandingly in forming such plans, it is essential that he should, in the outset, possess a thorough knowledge of the principles and general state of agriculture. The mediums through which this knowledge is to be acquired, are reading, conversation, and observation, aided by reflection and study.

We have frequently given our own views in regard to this subject, and though we might add "line upon line," we think we should not be able to show the important points in a more striking light than they are brought out in the following remarks of Hon. SAMUEL CHEEVER, in his address before the Agricultural Society of Saratoga County: EDS.

Unfortunately, the opinion has too long prevailed with us, that learning, that intellectual cultivation are unnecessary for the farmer; that to plow, to fence and to feed as our fathers did, is enough. If we see a farmer among us, and we do see many, who is ambitious to educate his son, to place him higher in community, he educates him to turn his back upon the farm, instead of turning his hands and his cultivated mind to it. But we have lived to see this deep-seated error, that education, that intellect are unnessary to the farmer, giving way to a more enlightened and correct public sentiment; and well may we be assured, that as education and intelligence go out upon our farms, will the farmer rise in his station. Intelligence—the cultivated mind, with pure morality, give rank, whenever and wherever found.

But rank alone is not all the farmer is to gain by intellectual cultivation.

The labors of state and county societies, aided by the exertions of many munificent and enlightened men among us, and the labors of scientific men, as well in this country as throughout Europe, have demonstrated the importance and even the necessity of *mind*, of *education*, of *science*, to the successful cultivation and management of our farms.

Still, with hundreds of favorable experiments and results before us, in support of this position, there are too many of our own class, who are daily telling us, that our agricultural books and our agricultural papers are not worth reading, and that agricultural science is a "*humbug*." To such I can only say, if you do not look about you, and do not read, you are in great danger of being left behind.

True it is, books alone, without practical observation, would be slow to make a good farmer. The professor of mathematics, directly from the schools, with all his books, would doubtless make a sorry figure in navigating the ship in a storm, and might receive useful lessons from the less educated ship-mate. But when the science of the mathematician is added to the practice of the sailor, the accomplished navigator is produced.

The practical farmer—boastingly calling himself so—may, if he has fallen upon a fertile spot, succeed for years, and get tolerable crops, by following in the old track, without the lights of science; and probably for the reason that he has accidentally hit upon the very course that science would indicate. But in a large portion of the long cultivated parts of our country, the fertility of the soil has been exhausted by those hereditary systems, if systems they may be called; and nothing but science and intelligence will produce restoration.

If the man without reading and without books, on finding his crops failing under a long and exhausted course, can be induced at all to seek improvement through experiment, he is as likely to make the wrong application as the right. He has seen his neighbor restore a field by the application of lime, and concludes his fields have the same disease, and must be cured by the same remedy. He lays out his money to make the experiment, and fails. Another neighbor has succeeded with plaster, and his money is again spent upon that, without success, and so he goes on exhausting the catalogue of manures and exhausting his purse until he gives up in despair, sells out to a *reading* farmer and goes to Wisconsin or Texas, where he can begin again, his exhausting process, upon a new and fertile spot. His reading successor examines his worn out soil or has it done for a few shillings, and finds it entirely exhausted and destitute of the essential element of *potash*. He applies a few bushels of ashes instead of lime, in which latter the soil already abounds, and his crops are soon doubled.

Instances similar to this, are occurring daily around us.

I place myself with the rest, when I say that no class of men in this country know so little of the business they follow as do our farmers.

The lawyer spends one-third of a life at his books, to fit himself to *enter* his profession, and then studies by day and night to understand his business and do his duty.

The divine is found spending all the days of an entire life at his books, to maintain his standing and discharge his duties.

The physician also enters his profession only through a long course of severe study, and then all his life, while a "*practical physician*," spends every spare moment at his books, to see what the skill and experiments of others are doing.

The commercial man and the manufacturer, spend their time at their business and their talents in studying the course of trade and the state of the markets.

The artizan of every craft, after years of apprenticeship, spends his days at his work and his nights at his books, to learn and profit himself in the mysteries of his art, and to understand the price current of his wares.

But the farmer is thought by some, to be *born* with all the knowledge necessary for his calling, and that learning and science are matters for other folks to trouble themselves about; when in fact how little do we know even of good *practical* farming, to say nothing of *scientific*.

What do most of us know of the component parts of the soil we cultivate, in what they are deficient, and the cheapest and best means to supply such deficiencies? and what do we know of the elements in the manures we are constantly using? Still we go on blind-fold, applying and mixing the one with the other, sometimes with good effect, sometimes with bad, and sometimes with no effect at all.

What should we think of the man who should enter the laboratory of the chemist, and proceed to throw together his alkalies, his acids and his metals without any knowledge of their properties or of their affinities, and then tell us he expected certain results? We should expect to see him burn his fingers at least, if he did not get blown up; and yet the admixture of soil, the application of manures, and the cultivation of our crops, is a constant but enlarged chemical process.

Again, what, as a class, do we know of correct systems of breeding and improving farm stock? of the anatomy and physiology of animals? of their diseases and their proper treatment? Enlightened, *practical* agriculture, aided by the lights of science, is daily solving and settling many of these questions which are of much importance to us, but questions which, in our confidence that we know all, have never once occurred to many of us.

But thanks to the spirit of the times, the dark days of agriculture are passing away, and light is breaking upon it so clear, "that *he that runs may read*," and he that does not read will be run away from.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Answers to Inquiries.

Is the Louise Bonne de Jersey as good on the pear as on the quince? Is the Spanish Chestnut hardy about Rochester? Is the apricot worth any thing as a market fruit in western New-York? *C. S. Herkimer Co., N. Y.*

The Louise Bonne de Jersey is unworthy of cultivation on pear stocks. On the quince it is greatly superior, and although scarcely of the highest quality, it is one of the most valuable of pears in consequence of its handsome, fair and fine fruit, and enormous productiveness.

The Spanish Chestnut, although hardy, does not ripen its fruit as far north as 43° lat. and for this reason is of little value here.

The Apricot succeeds finely in western New-York, when protected from the curculio, yielding crops about equal to most sorts of the plum. On a wet subsoil it does not flourish. It should be kept headed rather low, as the hot sun upon the trunk after severe winters, sometimes kills the bark and causes the death of the tree. It has not been much cultivated for market, but there is no doubt that with careful attention, it would prove very profitable, as it ripens some weeks before the early peaches, and most of early plums, and is showy, rich, and delicious.

What is a sufficient number of apples, pears, cherries, plums, peaches, nectarines, quinces, apricots, currants and gooseberries, to furnish an abundant supply for the home consumption of a family? *B. Harford Co., Md.*

No two persons would agree as to the number needed for this purpose. Throwing out of the estimate the difference in the size of families, and the still greater difference in their habits and profuseness. the number must be in a great measure governed by the age of the trees, the variation produced by unfavorable seasons, and more than all else by the cultivation given. The following may however, be taken as an approximation to an average, taking different circumstances into account, after the trees attain full bearing:

50 apple trees,
20 pear "
12 cherry "
10 plum "
25 peach "
5 quince "
8 apricot "
30 currant bushes,
15 gooseberry "

Most families find it convenient to dry considerable quantities of fruit, and whatever kinds are thus selected, must be in larger proportion than otherwise. Again, some are particularly partial to certain kinds, while others dislike them; as for instance the currant, which by some is placed at nearly the head of all fruits, and by others, far towards the bottom of the list. Again, apple trees, pears, &c. usually require many years to attain that size which gives us the largest crops, hence it may be advisable to set out a sufficient number, to give the requisite supply at a younger age. Besides this, some sorts, as the pear and apricot, are often liable to disease and death, and hence a larger number may be requisite to provide for this contingency. And above all, the kind of treatment the trees receive will exert a very great influence on the quantity (as well as the quality) of the fruit; a very few, with high, rich, clean, and mellow cultivation, often giving more than five times the number neglected and compelled to take care of themselves.

We have not included nectarines, as they require an unusual amount of protection from the curculio, and are only occasionally fine and well ripened.

What is the best mode of using charcoal as manure? I observe a great deal has been said in its favor. *B. Genesee Co., N. Y.*

Charcoal alone, is not very valuable as manure; but if it is placed so as to become mixed with the accumulation of privies, it forms one of the most fertilizing substances to be found. If chamber-ley is poured regularly upon a heap of charcoal dust, nearly the same result is effected. Charcoal possesses absorbent powers in a very high degree, and although perfectly inert of itself, it absorbs and renders inodorous, the most powerful of animal manures.

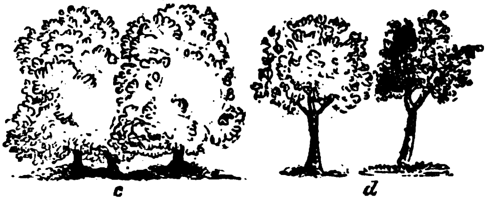
A Curiosity.

EDS. CULTIVATOR—My attention was lately called by Mr. D. D. Brower, to four plums growing on one twig in his garden, two of the plums being good sized Columbias, and two as perfect well sized Green Gages. The trunk of the tree was of the wild red plum (P. americana.) Two grafts, one of the Columbia, the other of the Green Gage, had been inserted, and came in contact the space of an inch and a-half immediately above the place of insertion. The bearing twig came from the Columbia graft, some eighteen or twenty inches above the place of contact. Can this be accounted for on scientific principles, or must we regard it as a *Lusus naturæ*. R. WATKINS. *Napoleon*, *Mich.*, *Sept.* 12, 1849.

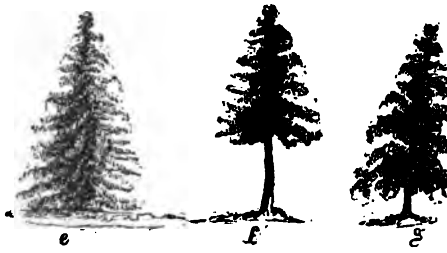
This, perhaps, cannot be accounted for on scientific or any other principles, and if no mistake has been made in the observations, it must stand as a fact by itself. It is true, that hybrids between two varieties of the same species (as of the two plums above mentioned) sometimes approach very near one parent or the other, but this result is not exhibited in the fruit which is the immediate result of the crossing, but only in the tree which grows from its seed. Otherwise, perhaps the above would not be so singular an occurrence. It will be observed that it is totally different from the impossible change which is sometimes claimed of one plant to another of a different species or even different genus.

Trimming Ornamental Trees.

Those who, with most praiseworthy enterprise, labor to embellish the country, as well as their own residences, by planting, very frequently commit a serious error in attempting to improve the natural forms of ornamental trees. Instead of pruning merely for the purpose of correcting a bad form of the heads without interfering with the varied grace of its outline, they copy as their models the practice of the farmer, who trims up his apple trees that he may plow beneath them, or of the herd of cattle, which strip off all the lower shoots to gratify their love of browsing. Fine specimens of elms and maples are sometimes seen in the natural landscape, whose stems have been rendered leafless by the animals which once fed beneath them, or whose lower branches have been smothered and destroyed by the shading influence of the surrounding forests where they formerly stood. These specimens are copied by the planter, without reflecting how much finer would be their appearance if they formed one mass of luxuriant foliage nearly down to the surface of the earth. In short, the practice has become quite common to trim up trees to a tall naked stem, merely because others have done it.



We have endeavored, in the annexed simple figures, to exhibit this error, and to show the superiority of low and fully developed forms, where (*c*) represents trees as true taste would form them, and (*d*) the too common style of sending up naked poles. Ornamental grounds are sometimes so thickly set with trees, that the eye can find no avenue for distant objects; and to remedy this inconvenience, the whole of them are suffered to stand, but a general slashing is made among the lower branches, and a vista is opened in various directions among the numerous tall and denuded stems. Incomparably better would be the appearance of such trees as in (*c*) with intervening lawns, through which the best distant views might be obtained.



The stems of trees or of tall shrubs are sometimes trimmed below, to admit the cultivation of smaller shrubs or herbaceous plants. A much finer effect is obtained by placing the smallest plants near the walk, to be succeeded by the taller species, as they gradually recede from it, the back ground being occupied by trees. The whole thus forms a rich mass of varied foliage, and when skilfully disposed, produces a magnificent effect.

Trees of regular or stiff outline, are made still more stiff and meagre by a naked stem, (*f*,) for this reason, such present a finer appearance when the lower branches rest directly upon the surface of the ground (*e*). But trees of a drooping habit, as the weeping willow, without a distinct and visible trunk, would be too straggling in growth. Hence, even the European Larch, (*g*) which although possessing a spiry or regular conical form, has quite drooping, smaller branches, may with great propriety, be allowed a short visible stem.

For these reasons, no kinds of roses should be propagated as *tree roses*, except those of a *drooping habit.*

Trimming Apple Orchards.

Farmers who own large orchards, usually find it convenient to prune during the mild weather of winter. There are few but have discovered that good and fair fruit is better grown, when the head of the tree is thinned enough to allow all parts a full chance. Small, smothered leaves, within a dense mass of brush, can never furnish a good supply of materials to the swelling fruit. Hence, evenly distributed and thrifty shoots, forming a well balanced and handsome head, must be the aim of every orchardist.

98

Many discover, after years of neglect, that their trees have become dense, matted, and scrubby; and to remedy the defect, the saw and axe are unsparingly applied, and large limbs are at once lopped, and the trees left naked and disfigured. The wounds, being large, must be covered with a water-proof composition, and a long time is required for their healing.

A better way is to begin early, while the trees are yet comparatively young, and on the first appearance of crooked and thick-growing shoots, to cut them out with a knife or chisel. This, if repeated each winter where it appears to be needed, will preserve the trees in good form and condition, so far as pruning is concerned. Even where the trees have become old and need much pruning, it is decidedly better to accomplish the desired thinning gradually in successive years, by a sparing and evenly distributed pruning, than to cut in heavily at once. In all instances, the cutting of very large limbs should be, if practicable, avoided.

Some of the best orchardists in the country never allow a heavier tool to be used in their orchards than the knife and chisel. The latter, for cutting expeditiously such branches as may be at a considerable height from the ground, avoiding at the same time the trouble of handling ladders, and the bruises and injuries to the bark, caused by ascending the tree, may be placed on the end of a pole (fig. 98,) a blow of a mallet at the lower end of which, will quickly separate closely and smoothly to the tree, any limb an inch and a-half in diameter.

While the importance of pruning is not to be forgotten, the indispensible necessity of manuring and rich and clean cultivation must be constantly borne in mind. A fertile soil and vigorous growth may to a great extent compensate for other neglect; but no cutting nor forming of the branches can impart life to a tree which is languishing in a hard, sterile, and neglected soil, overgrown with grass and weeds.

The Utility of Leaves.

Every person conversant with vegetable physiology is aware that the all important requisite in the growth of fine fruit, is a good supply of large, vigorous healthy leaves. A tree which is kept defoliated for a single season, must die; and fruit growing upon branches which are deprived of their leaves, cannot ripen—examples of which are furnished by the instant cessation in growth and ripening of fruit upon trees which become stripped by leaf-blight. In one instance, a dense crop of plums remained half grown and flavorless for several weeks, in consequence of the premature dropping of the foliage—a second crop of leaves three weeks afterwards, effected the completion of their growth, and their ripening to honied richness. The editor of the *Michigan Farmer*, mentions the following interesting case, in illustration of the same principle. "B. B. Moore, Esq., of Detroit, has a magnificent grape vine, spreading itself over one side of his house, which is at this time [Sept.] richly laden with fruit. After the clusters were formed, a cow entering the enclosure, ate off the leaves entirely, within her reach, but left the fruit unmolested. The consequence is, that upon the portion of the vine which was beyond the reach of the animal, (which constitutes the most of it,) never were finer clusters developed, while upon the small portion from which the leaves were removed, the clusters dwindled away, and have come to nothing, and that too up to the very line of separation between the mutilated and unmutilated portion."

Culture of Fruit.

I am a new subscriber to *The Cultivator*, and wish to know the most proper time for pruning, budding and transplanting the apple, pear, peach, plum and quince—also, the grape vine—with a catalogue of some of the best varieties of each. *O. H. W. Quaker Springs, Ga., Sept.* 1849.

The best time for transplanting is while the ground is in good condition for working, and between the period when the tree has ceased growing in autumn, and before the leaves burst in spring. In severe climates, tender kinds are most safely removed in the spring. In autumn, the work need not be delayed till the leaves fall, but they should be stripped off at the time of removal. Peach trees may be safely set out even as late as in blossom, and when the leaves are opening, if the young shoots are shortened back three quarters of their growth all over the tree; for this lightening of the head, lessens the draft on the roots, and the peach, possessing quick re-producing powers, soon sends out new shoots.

Pruning may be done in winter, or in the early part of summer. At the latter season, the new wounds made by cutting off small shoots, quickly heal over.

Budding is performed only while the stock is in a rapidly growing state, or before its growth has ceased—the bark must peel freely. But the work must not be done too soon, or before the inserted buds have become sufficiently matured. Some experience is necessary to enable any one to determine precisely, the most successful period. The bark of the plum peels less freely than most other trees, and if hardened buds can be had, it must be done early, or while growing most rapidly—other fruit trees may be budded when the growth begins to diminish in rapidity.

The grape is usually pruned late in autumn, and hardy sorts in winter.

A few of the best varieties of fruit for the South, are the following:—

Apples.—Early Harvest, Sweet Bough, Gravenstein, Fall Pippin, Yellow Bellflower, Swaar, Rhode Island Greening, Red Canada, Pryor's Red, Rawle's Jannet.

Pears.—Tyson, Washington, Seckel, Bartlett, Gray Doyenne, Louise Bonne of Jersey (on quince,) Dearborn's Seedling, Bilboa, Flemish Beauty, Paradise d' Automne, Beurre d' Aremberg.

Peaches.—Tillotson, Serrate Early York, Grosse Mignonne, Oldmixon Free, Large Early York, Early Crawford, Crawford's Late, Ward's Late Free, Heath Cling, Druid Hill.

Plums.—Washington, Green Gage, Jefferson, Lawrence's Favorite, Purple Favorite, Purple Gage, Coe's Golden Drop, Red Diaper.

Grapes—hardy open air,—Isabella, Catawba, Bland, Lenoir, Ohio. For grape house, Black Hamburgh, White Muscat of Alexandria, Royal Muscadine.

Quince.—Orange or apple quince. This varies much in form, from different seedlings, some being nearly round, others pear-shaped; and even on the same bush in different seasons, we have seen all grades of form from nearly spherical to that of a Capiaumont pear.

For further information, we must refer our correspondent to the books on this subject.

Laying Plans for Work.

The comparatively leisure season of winter, affords a peculiar opportunity for the cultivator of fruit to look over his practice and system of culture, and see where he may not introduce material improvements.

In the first place, every land owner may ask himself the question,—Have I trees enough planted? Cannot I get a heavier or more profitable return from my land, by extending my orchard, or improving the character of its products?

Many farmers have lately discovered that ten acres of orchard afford them more than 200 acres in corn, wheat, potatoes and grass. One hundred to five hundred dollars per acre are not unusual, where unusual pains have been taken to get the very best sorts. Are we not losing by delay? Remember, a market in Europe is beginning to open for fine apples and pears. Even the owner of a single square rod in a village, has gathered several bushels of grapes from a single vine in one year.

Have those about to plant selected the best ground? Remember that in most localities hills or elevated grounds are better than low and frosty valleys—tender fruits may bear well in the former, and be cut off in the latter—and that however dry the surface, a wet subsoil is very bad for all tender fruit trees.

Let every person who has or expects to have a fine fruit garden, remember that a peculiar sin of vagrant boys is fruit stealing—that the circle of idle village boys' rambles has a radius of at least a mile and a-half—and that a terrific hedge of osage orange is a more quiet and secure protection than spring guns, emetic-tartar, or bull-dogs. Let the hedge and fruit-trees advance in growth together.

Has the soil for receiving the young orchards been sufficiently prepared? Subsoiled? Trench-plowed? Deeply intermixed with manure and tempered with ashes? This labor may quadruple the crop in five years, and improve its quality beyond any scale of measurement.

Is the new fruit-garden laid out to admit the future fencing off of the smooth stone-fruit, for enclosing pigs and geese? Remember that these animals are the great destroyers of the curculio, and will eminently assist all other remedies.

Have the most delicious sorts been selected? A Doyenne or Tyson pear, a Black Eagle or Downton cherry, grow as freely in a rich soil and a free air, as the most austere and repulsive wildings. Have the most productive for market been chosen? Ten trees of the Baldwin and Rhode Island Greening will yield more than fifty trees of some other sorts. One square rod of the Cincinnati Hudson strawberry, will sooner fill a half-bushel basket, than twenty rods of the British Queen or Myatt's Eliza.

Care in these particulars will give us a great addition to rural comforts. But while the palate is gratified, do not forget another and higher kind of taste, through the eye, gratified by ornamental and shade trees around the dwelling. These have another use,—sheltering from severe winds. A friend whose house is well surrounded by evergreen trees, thinks he saves several cords of fuel in this way in each year. Still another motive should induce ornamental planting. Adding to the comforts and attractions of home, is a strong inducement to prevent boys and young men from seeking amusement at the tavern and grog-shop.

Evergreens for ornamenting grounds about dwellings are well removed in winter, by carrying with the roots a large cake of earth, whether frozen or unfrozen, (the latter is easiest,) which will almost insure the certainty of their growth.

Hints for the Season.

Prune orchards—trim hardy grapes—cut grafts, they may be very easily and safely preserved in a large box of damp moss, or buried wholly in earth, protected from contact with it by enclosing in a box open below. Young trees which have not been banked round the stem, should have the snow trodden round them, to guard against mice. Caterpillar's eggs may be now cut from the young shoots in orchards. Marking-labels may be made, stakes for stiffening newly transplanted trees, and boxes set with glass, for covering early vegetables. Trees sent long distances late in autumn, are sometimes received frozen, in which case the packing should be immediately removed, and the roots before thawing buried in the earth. A tree frozen out of ground will escape injury if thawed beneath the soil; but if thawed while exposed to the air, it will perish.

Market Apples.

Mr. Editor—Will you please name what you consider the best 20 or 25 sorts of market apples with you—planted *solely for profit*—in which of course the vigor and productiveness of the trees must rank among the most important characteristics. Let them be divided as to season about as follows:—6 early, 4 or 6 fall, and ten or 12 winter variety, and mostly long keeping. F. K. Phœnix. *Delevan, Wisconsin, Oct.* 2, 1849.

Handsome, fair, and productive sorts, constitute at present the most popular for market; quality is usually a secondary consideration. But with the rapidly increasing knowledge of fruits of delicious flavor, as they become disseminated through the country, external appearance alone will not in future be regarded as all-essential. For this reason some are included in the following list, of very high flavor, which are not so fair and productive as others of second quality. The sorts here named are such as have been tested in different regions—there may be a few new varieties which future trial may prove of equal value.

Summer Fruit—Early Harvest, Red Astrachan, Early Strawberry, Williams' Favorite, Bough, Golden Sweet.

Autumn Fruit—Late Strawberry, Gravenstein, Porter, Lowell, Haskell Sweet.

Winter Fruit—Hubbardston Nonsuch, Belmont, (or Waxen,) Peck's Pleasant, for Early Winter—and Baldwin, Red Canada, Jonathan, Swaar, Rhode Island Greening, Roxbury Russet, Esopus Spitzenburgh, Northern Spy, Newtown Pippin, with high rich culture for the last two named.

Peaches at the South.

M. W. Phillips, of Edwards, Miss., gives the following list of peaches, known at the north, with their times of ripening on his grounds. They are taken from some seventy sorts, as being first-rate in quality. The list is condensed from the *Southern Cultivator*.

June 6, Early Tillotson, Serrate Early York
 12, Red Rareripe, Cooledge's Favorite.
 19, George the Fourth.
 20, Hoffman's Favorite, White Imperial, Crawford's Early, Poll's Melocoton.
June 25, Smooth-leaved Royal George.
July 2, Walter's Early.
 5, Oldmixon Cling.
 12, Large White Cling, Red Cheek Melocoton, Lemon Cling.
 13, Brevoort's Morris, Bergen's Yellow, Crawford's Late, Columbia.
 20, Druid Hill.
 28, Monstrous Pavie.
Sept. 1, Smock Free (best of its season.)

S. W. Montgomery, of Hinds Co., Miss., furnishes a list with the times of ripening, from which the following are selected; all are of fine quality but the first.

May 28, White Nutmeg, (worthless.)
June 4, Early Tillotson.
 6, Serrate Early York.
 12, Burgess' Beauty.
 15, Cole's Early Red, (good.)
 18, White Imperial.
 20, Crawford's Early, Malta.
July 2, Walter's Early.
 8, Large White Cling.
 12, Red Cheek Melocoton.
 18, Druid Hill.
 28, Monstrous Pavie.

Coloring Blue.—An exchange gives the following directions for a simple blue dye, ready for use at all times: "Put one ounce of pulverized indigo into three ounces of oil of vitriol. The bottle should not be more than one-third full, as it sometimes ferments. Let it stand at least two weeks, the older the better. Shake it well once a day for a week or more; if too thick, add water. This mixture, with warm water and alum, will color any shade of blue in five minutes."

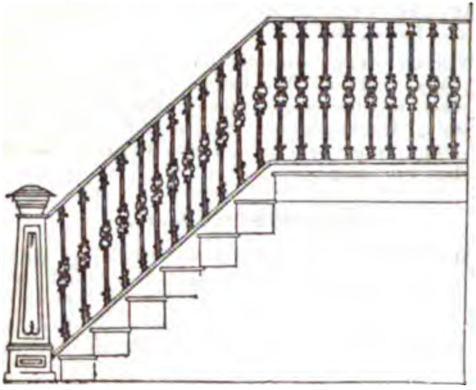
Consumption of Timber.—Sinclair, in his Code of Agriculture, states that a 74 gun ship requires 3,000 loads of wood, the produce of 50 acres of heavily timbered land.

☞ To cause an abundance of grass, is the foundation of all good husbandry, and should be the first and last object of every one who desires to be a successful and prosperous farmer.

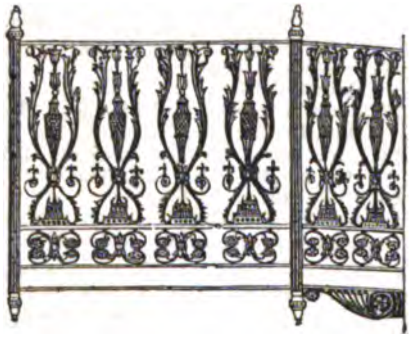
The Farmer's Note-Book.

Cast-Iron Railings, &c.

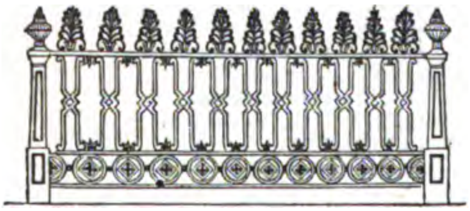
Among the improvements of the day, the adaptation of iron to various purposes, is quite conspicuous. Not only has the use of this metal been greatly extended, by being applied to a greater variety of objects, but it has been made to assume forms much more tasteful and ornamental than formerly.



92—*Stoop-railing*—$25.

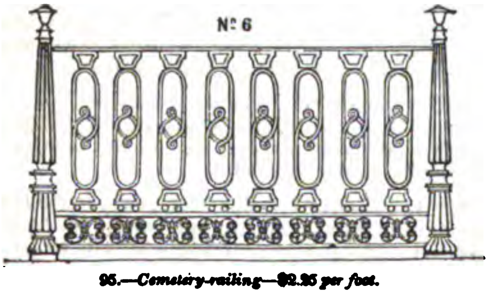


93—*Balcony-railing*—$2.50 *per foot.*



94—*Cemetery-railing*—$2.50 *per foot.*

A good example of this is afforded in the use of cast-iron for stoops and stoop-railing, for balconies, ornamental fences, &c., as illustrated by the accompanying cuts. The various articles represented are manufactured by Messrs. Starks & Pruyn, corner of Pruyn and Liberty streets, Albany, who also manufacture a great variety of similar articles. some of which are sold at prices much lower than those here described. Persons wishing to obtain any thing in this line, would do well to call at their establishment.



95.—*Cemetery-railing*—$2.25 *per foot.*

Characteristics of the Season 1849.

The season just gone by, will probably be chiefly remembered, in this country, on account of the visitation of the *cholera*, that mysterious pestilence, which, with more or less mortality, passed over our principal cities and towns, and the melancholy records of whose ravages have been made public through the appropriate channels.

In a meteorological view, the summer of 1849 was particularly distiuguished for the prevalence of a severe drouth, and the remarkable absence of thunder and lightning, throughout the northern and eastern states. Over a large portion of New-York and New England, there was no rain to benefit vegetation from the 15th of June to the 6th of August; and in the central and western parts of New-York, the ground did not become fairly soaked till the 1st of October, though there were previously light rains which afforded some benefit to corn and other crops.

Hay, was generally good, as to quantity, except in the northern sections of the country, where it was cut off by the drouth.

Wheat, as to yield, was very variable, taking the country together. So far as we hear, the sections devoted to this grain to the eastward of the Allegany mountains, have turned out their usual quantity, and the same may be said of New-York, the northern parts of Ohio, Indiana, Illinois, and the greater portion of Michigan and Wisconsin.—Throughout a great extent of country to the south-west, the crop was injured by rust. In some districts it was also injured by the wheat-midge.

Rye yielded well. This grain is now raised in the eastern part of New-York, and to a considerable extent in Vermont, Massachusetts and Connecticut, on lands which formerly produced good wheat—the cultivation of the latter having been discontinued, principally on account of the attacks of the wheat-midge, from which insect rye is not materially injured.

Barley was injured by drouth, and the yield cut off; but to what per cent., we have no means of estimating.

Oats, in the eastern and south-eastern parts of New-York, were much injured by drouth, and in some instances nearly destroyed. The grain is also of much less than average weight. In the northern part of the stato, and in the Canadas, where the crop is always sown later in the season, we learn that it so far recovered, after the rains, as to give a fair yield, in some instances.

Indian Corn has been greatly reduced in yield, in the sections above mentioned as having been visited by drouth. In the great corn region of the south-west, embracing the southern parts of Ohio, Indiana, Illinois, western Virginia, Kentucky, Tennessee, and Missouri, we are informed that the yield is very heavy. In New-York and New-England, the yield will fall below an average. We hear of but few *large* crops, and they are in locations particularly favored in respect to moisture. In most instances, the yield is represented to have been lessened by drouth from twenty to forty per cent.

Potatoes have generally given but a light yield

The deficiency is owing to drouth, and not to the prevalence of the disease, which for several years has been so destructive to this crop. Of this malady, the cause of which has so long furnished a fertile subject of speculation, we have heard but little the past season, either in this country or from Europe. Enough of it, however, has appeared on both continents, to show that it is not yet extinct. Whether it is to return in future years, we can form no reasonable conjecture. In regard to remedies or means of prevention, we have nothing new to offer.

Dairy products have been lessened in quantity by the drouth. In some instances, we have heard the amount of butter and cheese estimated at twenty-five per cent. less than a common average. From the general extension of the business, however, it is supposed that the whole quantity brought into market, will be at least equal to that of any previous year.

Fruits in general, have, with other crops, experienced the effects of protracted drouth. Apples are scarce. In some districts, the fruit set well, but became stunted from lack of moisture, apparently, and is comparatively of a diminutive size. The high price in market indicates the deficiency of the crop. Pears are not as plenty, nor of as good size as usual. The *blight* of the tree has been less prevalent in this vicinity, than in some former years. Plums may be said to be the only fruit of which there was an abundance in this vicinity. Of this crop, we had none in 1848, and from the trees thus having a year of rest, their capacity for production was probably increased; and hence they bore excessively the past season—many trees, where attention was not given to lighten the burden, having been broken down. There were more peaches in the northern sections of the country, than are usually obtained; though they are never found here in large quantities.

The weather during autumn has been mild. A frost occurred on the morning of the third of September, but not of sufficient severity to do injury, except in particular situations; where corn, potatoes, beans, &c., were nipped. There was no general frost to affect vegetation, till the first of October, and even up to the first of November, it was only on a few mornings, that frost was visible at all. Many of our gardens presented a freshness of foliage in the middle of October, which in ordinary seasons is not met with later than the middle of September. This was partly owing to the renewed energies of vegetation from the effects of rain, after the partial dormancy occasioned by drouth. The The same effect was visible in the greenness of pastures and grass-fields, which in the eastern part of New-York and parts of New-England, were well covered with verdure, from about the middle of August to the close of the season. Copious and extensive rains fell during the month of October, replenishing the streams and fountains, which had been lower than for many previous years.

Crops in Europe are represented as generally good. In Great Britain, the grain harvest is said to be bountiful.

Black-Sea Wheat.

Eds. Cultivator—In an article on "Farming in Missouri," in your October No., the writer, Mr. Hammond, speaks of the failure of the wheat crop in his section, by rust, winter-killing, &c. It occurred to me that if the farmers there had our variety of the Black Sea wheat, and should adopt our practice of spring sowing, these difficulties might in a good degree be avoided. The Black Sea wheat is sown any time from the tenth of March to the tenth of June, and from its doing well under these circumstances, I am led to conclude it would flourish in a more southern latitude. It yields in Vermont, in good soil, as high as 30 to 40 bushels per acre, and weighs 64 lbs. to the bushel. Jonathan Wainwright, of this town, in 1846, raised 30 acres, which I was credibly informed yielded 30 bushels to the acre, of the above weight. This, however, was not done on the "skinning process," but by a liberal application of ashes and stable manure, and thorough preparation of the ground. Elisha Fuller. *Middlebury, Vt., Oct. 22, 1849.*

Yield of Butter.

Eds. Cultivator—Having lately prepared a report on Dairy Products for the present year, in the county of Essex, Mass., I abstract therefrom the following facts, which may afford some data for the comparison of the products of this northern region with other more favored climes. The time of the production of the butter was nearly, in each case, from the 24th of May, to the 24th of September, 124 days.

Claimant.	Residence.	No. of Cows.	Amt in lbs.	Daily av. per cow.
John Stone,.....	Marblehead,	4	690	1.25
Daniel Putnam,.	Danvers, ...	6	744	.94
Elijah Pope,....	do ...	4	434	.87
Chas. P. Preston,	do ...	8	786	.88
George Pearson,	Saugus, ...	6	652	.95
Nath'l. Felton,..	Danvers, ...	8	884	.98
Jonathan Berry,	Middleton,..	8	790	.88
D. McNaughton,	Newberry,..	5	490	.75
John Preston,...	Danvers, ...	4	366	.84
N. D. Hawks, ..	Lynnfield, ..	4	340	.75
		57	6106 lbs	

Being an average product of about seven-eighths of a pound per cow, daily through the season; and about one pound daily per cow through the month of June. All these cows, except two belonging to Mr. Pearson, were "natives." Those of the first-named claimant, Mr. Stone, were all of one stock. The mother of them, five years since, afforded 16¼ lbs. in a week. This has a tendency to prove that "like produces like." They are without horns. The feed of the cows was generally common pasture. When the drouth came on in August, they were supplied with green corn and corn stalks. If these facts are thought worthy of your notice, I am happy to communicate them for your excellent Journal. John W. Proctor. *Danvers, Oct.* 25.

Fat in Animals.

Much has been said in regard to the importance of the oily principle in the food of animals designed to be fattened; the idea being entertained by some that the fat is derived wholly from that source. We have always thought the theory was carried farther than facts would warrant; because it does not appear that animals fatten in proportion to the oil contained in their food; and because, when animals are kept on exactly the same kinds and quantities of food, they do not secrete equal quantities of fat. If a Berkshire pig and a Chinese pig are fed precisely alike, the one makes chiefly lean meat and the other fat; and there is the same difference in some kinds of cattle.

We learn from the London *Farmer's Magazine*, that the French chemist, Boussingault, has lately made some experiments in relation to this subject, the results of which are worthy of note. Eds.

Boussingault fed a number of pigeons on lard, another lot on the white of an egg, and another on starch, and a fourth he deprived of food altogether. The results were briefly as follows:—

	Fed with	Proportion of Fat in their Blood.
Pigeons 3 weeks old	1. Starch......	.0021
	2. White of egg	.0056
	3. Nothing	.0043
Pigeons 4 weeks old	1. Starch......	.0046
	2. White of egg	.0055
	3. Lard	.0065
	4. Nothing	.0070
Ducks,............	1. Starch......	.0042
	2. White of egg	.0044
	3. Nuts	.0049
	4. Nothing	.0034

From this experiment Boussingault draws the following conclusions:—

1st. In opposition to previous opinion, that the fat in the blood cannot be increased by fat in the food.

2d. The proportion only varies between about 4-1000 to 5-1000; and

3d. That the fat in the blood is in no case derived immediately from fat in the food, because those animals which received no food at all had as much fat in their blood as those which were fed on hog's lard.

So far, these experiments seem satisfactory; and when coupled with the fact that the food of our fattening animals—as potatoes, turneps, and such like—contain fatty substances in almost infinitesimal proportions, we may consider the non-importance of these substances (about which so much has been said and written) as almost established.

Natural Grasses.

In the extreme scarcity and exorbitant price of Herd's grass seed, the introduction of any substitute, combining its valuable qualities, is highly desirable. I have heard it asserted by those who profess to speak from experience, that Red Top is well adapted to laying down upland dry meadows, and pastures of light sand or of gravelly soil. I know it to be equal, if not superior to Herd's grass (Timothy,) for forming a permanent ley in low and moist grounds. It produces, I consider, a more tenacious sward, more enduring, and less liable to be affected by the changes and severities of our climate, whilst the hay it affords often exceeds the Herd's grass, both in quantity and quality. The usually received opinions of the nature and habits of the Red Top, have led us to suppose that it is congenial to, and will only flourish in deep, rich, and moist soils, and that it is not calculated for other situations. If the idea is correct, that this grass is adapted to the soils of a light and sandy character, it presents a most important fact, that should be generally promulgated

A natural grass, uniting many important and desirable properties, occurs in this region upon, and in the vicinity of low marshy grounds. It generally selects a soil warmer than the natural marsh, frequently exhibiting itself along the line of earth thrown up in ditching of low lands. If susceptible of general cultivation, I would esteem it an acquisition of high consequence. I have recently observed that it appears gradually to insinuate itself more extensively among the wild grasses and brakes of our marsh meadows. I have not determined its botanical name; but in the popular nomenclature, it is designated the Blue Joint,—analogous in name only, I apprehend, to the Blue Grass, so celebrated in Kentucky. When growing, it presents a most beautiful spectacle; its matted masses waving in rich verdure and brilliant luxuriance. It forms a hollow stalk, often reaching, on favorable positions, eight and nine feet in height, bearing a series of broad linear leaves, with continuous sheaths enclosing the entire stem, which is surmounted by a heavy peduncle, presenting, when ripe, the appearance in shape and colour of a fox's tail. The foliage is excessively thick and heavy, and the plant usually occurring in clusters, so vigorous and mingled as to be almost impenetrable to the smaller animals. The growth and yield of fodder far surpasses that of any grass within my knowledge. Every description of stock feed on it with avidity; and I am not aware but that it possesses equally nutritive qualities with the cultivated grasses.

Is any reader of the Cultivator familiar with this grass? Is it adapted to cultivation, or has any effort been made towards its introduction into artificial culture?

The writer of this article has for several seasons been attracted by the appearance, and observed the habits of this plant with much interest, until the conviction has been formed, that it is susceptible of cultivation, and capable of taking a high rank among our improved grasses. W. C. W. *Port Kent, N. Y., November,* 1849.

Variety of Corn.

Eds. Cultivator—The intention of this brief communication is simply to remove an erroneous impression entertained by many of the readers of the Cultivator, and more fully expressed, in a short notice of the merits of the south Oregon corn, in one of the spring numbers of the Cultivator. I mean, that of its not being early enough for the northern states, and of its belonging to the "dent" class of southern corn. True, it grows finely south, and likewise west; and is cultivated with admirable success in Ohio, as I am informed. I did not, as you are aware, make any reply to those doubts,—not deeming it absolutely necessary at the time; but can now, with a certainty, recommend this variety of Indian corn, as being in every essential point preferable to any of the northern varieties raised for market, coming under my observation, many of which I have known tested. And in point of shelling, the Oregon corn will give a yield of six bushels per barrel of shelled corn; and no northern corn can ever come up to this. I have no doubt it will suit your climate admirably well, judging from its prolific yield in Maryland, and the high estimation it possesses in Ohio.

The present year, I have been more particular as to planting and gathering this corn. I planted about six acres the 25th of April, the land not having recovered from the severe cold of the middle of that month; the six acres were set with a peach and apple orchard eight years old. This land was manured two years past, broadcast, and has been cultivated every year since,—the present year in corn, as stated above. The first week in October, I gathered the corn, it being sufficiently dry to go to mill notwithstanding the disadvantage of the shade of the trees, now full of leaves. From this lot. I have housed more than double the quantity of corn taken off the same land before, even without the trees, in the last sixteen years; and I think I might have taken the corn off the 15th of September, with perfect safety. This corn is large, heavy, and of a beautiful orange yellow. A. G. Moody. *Smithfield, Isle of Wight county, Va., Oct.* 21, 1849.

It should be remembered that in a large portion of the northern and New-England states, corn cannot usually be planted till the 20th to the last of May—at least a month later than the time mentioned by Mr. Moody, 25th of April; and it is important that the crop be well out of the way of frost early in September. Ed.

Extracts from Agricultural Addresses.

Improvement of Dairy Stock.—Mr. Eames, in an address before the Jefferson County Ag. Society, says—We deem it an easy matter to add twenty-five per cent. to the daries of this county, clear of all expenditure of time and money, by improving the quality of the cows. It is believed that there is no dairy in the country, consisting of ten cows or more, which does not show a difference of one-third in the yield of milk from the best to the poorest cow in the yard, yet the same amount of food is consumed by the poorest as by the best. Now to keep an inferior cow through the long winters of this Northern region with the prospect of only obtaining a two-thirds yield in the summer, we hold to be the most miserable policy in the world; it is a sufficient deduction in any case, from the gross income of the dairy, to feed and properly tend upon the best cow we can raise or buy.

Influence of Agricultural Societies.—Judge Cheever, in his late address, makes the following observations:

Happy indeed would have been those men, since gone to their final rest, who, 17 years ago, met at Albany to lay the foundation of a State Agricultural Society, could they have forseen that in so short a time such wide-spread and valuable results would follow their magnanimous and well-directed beginnings. And happy indeed *are* their associates, who have been spared to this day, to see, as part of the result of their labor, the holding of annual Fairs in a large majority of all the counties of this state, and the holding of a grand State Fair, which annually brings together, from all parts of the State, from all parts of the United States and the neighboring provinces, more people, embodying more effective enterprise and moral worth, than has been or can be brought together on any other occasion or for any other purpose.

These meetings are not held for mere past-time, nor to further the plans of political aspirants, or secure the ascendency of one political division over another, but for the *substantial improvement of the condition of man;* and this by simply exhibiting by some, and witnessing by others, the great end which skill and enterprise are accomplishing, in the great science of human subsistence, Agriculture.

Order and System.—Order and system are essential to success in every employment, but peculiarly so, in the varied operations of farming. Without them, confusion reigns. The business of the farm is ever in such a condition that it demands attention, and thus it directs and controls, instead of being directed and controlled. But with them, "all moves on in one harmonious whole." Every thing is performed at its appointed time and in an appropriate manner, and there is leisure for information and scientific pursuits. Some farmers act under the impression that their employment is so profitless that they cannot afford to procure better farming implements and machines, and be to the expense of making improvements. Let such be assured that so long as they are possessed with this idea, so long their business will become more and more profitless.—Mr. Bank's *Address.*

Influence of Manure.—When I visited England, six years ago, the first thing that struck me was the beauty and fertility of the soil. Every farm appears a garden. In fact, England *is* a garden. Even the sides of railroads, up to within a few feet of the iron track, are made to produce wheat, barley or potatoes. The beautiful lines of hedges, which so gladden the eye of an American, enclose no uncultivated lands. The very hill-tops are made fertile to their summits; the swamps are drained, ditched and blind ditched, and every foot of earth that the labor and ingenuity of man can render cultivatable, is made to send forth its green stalks and golden harvests.

It is important that the American, and especially the New-England farmer, should know *how* this is all done. I have dined and lived with English farmers; I have associated with them; I have frequently obtained their friendship, and sometimes their confidence; and, by hook and by crook, I have wormed this important secret out of them. I have obtained their philosopher's stone; I have got the clue to the ever-living fertility of their soil; and now, Connecticut farmers, in the fulness of my heart, which happens at this time to be overflowing with the "milk of human kindness," I will *freely*, without the hope of fee or reward, impart to you this grand *secret*. See that you improve by it. It all consists of one simple word—manure.—*Address of* P. T. Barnum *before the Fairfield (Ct.) Ag. Society.*

Let every farmer gather and accumulate his weeds, muck, swamp mud, charcoal dust, coal ashes, soap suds and excrements from his horses and horned cattle, and all the liquid manures from his yard, and properly protect them from rain and snow, and he has, in one vast pile, a capital fund on which to base all his farming operations for the year. But how different from all this is the practice of many farmers! In nine cases out of ten, the liquids are permitted to run over the yard; to lose their nitrogen, which passes off in the form of ammonia; their salts, which are carried away by continual drenching and nearly every valuable property which is in any way dependent upon the atmosphere; until, in fact, every chemical ingredient, without which neither plants nor seeds can exist, is lost to all the practical purposes of farming. Such a reckless policy with regard to the enriching commodities, accounts, to a greater extent than any other cause, for the meager productions of the farm.—*Address of* Mr. Eames.

What are "Native" Cattle?

Rev. W. A. Drew in his address before the Agricultural Societies of Kennebec and Franklin counties, (Me.,) makes the following remarks:

"With regard to stock, I suppose Maine can boast of the best working oxen of any State in the Union. When Southerners, or even people from the Middle States, come here, they are surprised at the magnificence of our ox teams. And we have native cows equal to any of the royal *bloods* of England."

He then goes on to speak of the valuable properties of several "native" cows, that he has known; though he gives no particulars in regard to their products, by which we can compare them with others. The meaning of the term "native," as used in this case, is, perhaps, somewhat illustrated by the paragraph which follows next in connexion, in the same address, as follows:

"Our Kennebec valley is greatly indebted to the late lamented Dr. Vaughan, of Hallowell, for its enviable race of neat cattle. In the infancy of this county, when he first moved into it, he took great pains to import the best breeds from England; these became crossed with the native stock, and have built up some of the most magnificent oxen and the best milch cows in the country. Our State owes a lasting debt of gratitude to that great and truly good man for the fruits he introduced, and the cattle and sheep he imported, which now bless the State of which he was one of the earliest and truest friends."

Thus, the origin of the "enviable race of neat cattle," to be found in the Kennebec valley, is traced to the "best breeds from England," imported by Mr. Vaughan; crosses from which "have built up some of the most magnificent oxen and the *best milch cows* in the country"!

We heartily concur in the tribute paid the "great and truly good man," whose name is mentioned in the above quotation; but at the same time we would beg leave to correct an error. It was the late CHARLES VAUGHAN, Esq., and not Dr. BENJAMIN VAUGHAN, who imported the cattle from England. These two gentlemen, brothers, settled in Maine nearly at the same period; and both conferred important benefits on that part of the country, by their liberal efforts for the improvement of its agriculture. The importation alluded to was made in 1792. It consisted of two bulls and two cows. One of the cows, while on the passage, dropped a bull calf; and this animal, having been presented by Mr. Vaughan to the late Hon. CHRISTOPHER GORE, of Massachusetts, became the foundation of what was afterwards widely known as "the Gore breed." The other stock was the foundation of the celebrated herds of the Messrs. Vaughan, and was continued by them without admixture of other blood, till 1824, when a cross was made with the imported short-horn bull Denton. For nearly forty years, bulls were annually obtained from these herds, and taken to different parts of the State; and many other bulls and cows of various breeds—such as Bakewell, or long-horn,—short-horn, of different families,—Hereford, Devon, &c.—have been introduced at various times; and unless the general character of the cattle of the State has lately undergone a great change, it is not easy to find a *good* animal for *any purpose*, that does not bear evident marks of an affinity with some of these stocks.

Report of the Commissioner of Patents.

We have before us a copy of the report from this Bureau for 1848. Like the volume from the same source for the previous year, it contains a mass of useful matter relating to the progress of the mechanic arts, and to the products and improvements of agriculture. The staple products of the United States for the year 1848, are put down as follows: wheat 126,000,000 bus.; corn 588,000,000 bus.; oats 185,000,000 bus.; potatoes 114,000,000 bus.; rye 33,000,000 bus.; buckwheat 12,500,000 bus.; barley 6,222,000 bus.; hay 15,735,000 tons; hemp 20,330 tons; cotton 1,066,000,000 pounds; tobacco 219,000,000; rice 119,000,000 pounds; sugar (produced in Louisiana) 200,000,000 pounds.

The following appropriate remarks are made in relation to the increased attention which has lately been given to the subject of agriculture:

"The world has, within comparatively a few years, learned that agriculture offers an almost illimitable field for the operations of the scientific as well as practical experimenter. Its full development seems to require the application of all the physical sciences in some form or other—in the analysis of soils; in the nature, structure and habits of plants; in the food of plants and the adaptation of soils and manures to their sustenance and growth; in the improvement of the races and kinds of animals; in the invention and improvement of useful implements and machines; and finally, in political economy, which points the agriculturist to the contemplation of his interests as they may be affected by the institutions and the legislation of governments. Viewed in this light agriculture may truly be regarded as the most important, dignified, elevated and honorable pursuit in which man can engage. The intellectual qualifications which the cultivation of the science of agriculture requires, are therefore not second in degree to those which are necessary for the pursuit of any other science. Hence the importance of study, experiment, and close observation on the part of the agriculturist. All who may be engaged in that elevating and ennobling pursuit, may not have the time nor the opportunity to become thoroughly versed in the philosophy which lies at its foundation, but, in a life devoted to its practice, the humblest will have the time and the opportunity to acquire much interesting and valuable knowledge."

The American Fruit Culturist.

MESSRS. EDITORS—Your brief notice of this new work by Mr. THOMAS, induced me to procure it; and I have been so well pleased with it, that I beg leave to call the attention of your readers to what I consider its improvements over former works of this kind. Unlike the old Fruit Culturist, which contained a separate descriptive catalogue of the great mass of kinds, the different varieties are all placed together, so as to be all embodied under a distinct classification. All confusion is prevented, by the quality of each sort being shown by the type used for the name, so that the reader has only to glance his eye over the column of names, to select what is most valuable,—what is next so, and so forth. Thus, taking the *Apple* as an example, the most highly celebrated and best, 13 in number, are in large CAPITALS—the next in celebrity and value, consisting of over 50, and nearly all first-rate fruits, are in SMALL CAPITALS—the next grade, comprising about 100, possessing good or valuable qualities, but only recommended for large collections, and including also unestablished new sorts, are in *Italics*; while the remainder, about 75, being those unworthy of cultivation, are in common Roman letters. The accuracy with which these rejected sorts have been designated, is shown by the correspondence, *without a single exception*, so far as the list goes, with the rejected list made out by the American Pomological Congress since the publication of Mr. Thomas' book.

The vast number of varieties which our nurserymen have propagated for sale, and which have thus become disseminated far and wide through the country, renders such a book particularly appropriate at the present time, serving to point out the good from the bad, and being just what the great mass of the community now wants, in reducing the list of sorts by retaining the best.

In searching for descriptions, a vast amount of labor is saved by the arrangement adopted by Mr. T. For example, suppose a young cultivator has fruited a fine new apple, but has lost the name, and which I will suppose is the Gravenstein. He perceives it is an *autumn* fruit; he therefore turns to the division appropriated to *autumn apples*. It is *sub-acid;* he turns to the class of this division containing *sub-acid* fruit. It is *striped* with red; the section of this class for striped apples is quickly examined, and all the labor saved of turning over the whole list of autumn apples in search of the names,

The same terms are used for describing the sorts as in former works, but they are made much more clear and definite to the ordinary reader, by the distinct definitions given of their exact meaning, and made quite plain by the use of cuts.

There are a number of smaller improvements of great convenience, as the adoption of English names instead of French, whenever practicable, for the best sorts—a glossary explaining terms, and others which my limits preclude noticing; besides which the book contains all the recent and important discoveries in relation to fruit culture, posted down to the present time.

Respectfully yours, R. R.

Domestic Economy, Recipes, &c.

Preserving Fruit—Bread.

Eds. Cultivator—As the season has returned n which it is time to be packing away dried fruits, I am reminded of a notice in the last year's Cultivator, of a method of preserving dried fruits from the depredations of insects; which was by sprinkling them with brandy. Now, as I am decidedly opposed to laying a temptation, *even before a reptile, to drink brandy*, I will give you my method, which I have practiced with *perfect success* many years. As soon as the fruits are sufficiently dried, I spread them upon tins, and set them in an oven (hot enough to bake bread,) about two minutes,* and then pack them in *tight* papers or cloth bags, and they require no further attention if kept several years.

I noticed also that brandy would prevent bread from becoming heavy, which was made of flour from grown wheat. I think I can recommend a better specific. I have never had occasion to try the experiment myself; but a lady showed me some very light bread, which she said was made from the flour of grain that was sprouted very badly. She said, after it was risen, she made it stiff enough to mould with buckwheat flour, and though not quite as white, it must be more wholesome than that which is made light with brandy. Yours respectfully, F. S. C. *Canaan, Ct., September*, 1849.

Manufacture of Cheese.

The committee appointed by the Jefferson County Agricultural Society, to examine cheese dairies, say, in their report:—We endeavored to collect information from those best qualified to instruct, and to compare the different opinions upon the subject, and briefly point out the defects, (or the reasons for them,) which we noticed in our examinations. When a thermometer was used we found great uniformity as to the temperature at which the milk was set, as it is termed, for cheese, generally from 84 to 86°, the extremes being from 80 to 90°, and scald from 100 to 106°, and a common sized tea-cup full of salt to from twelve to fifteen pounds of cheese. But where the figures for setting, scalding, and salting were the same, we found the results widely different. The most prominent reason for this difference, in our opinion, is the length of ime that the curd is scalded, and the time that it s salted; if scalded at 100° and scalded one hour, t will be as hard, and make as firm cheese—all other parts of the process being the same—as it will scalded 30 minutes, at 104, or perhaps 106°; and n salting, it requires much judgment. If the salt s put into the curd before the whey is sufficiently drained off, it will drain off with the whey, leaving a lack of salt, consequently a soft, and, to use a dairy term, the huffy cheese; and if not put in sufficiently soon, it will not be properly mixed, making t uneven or knotty.

Cheese should be made pretty firm. It is now an article of export, and if made too soft is not only liable to loss in transportation, but a very smart cheese, bordering upon strong, does not suit the market, a milder article being preferred. We noticed several dairymen making mistakes in this particular—endeavoring to make their cheese quite too soft, supposing it to be more marketable.

We will only add, if your cheese is too soft, scald higher and longer, and add a little more salt, and be careful not to have too much of it run off with the whey. If hard and knotty, put in your salt sooner, almost as soon as you get it in the sink; if this does not remedy the matter, scald less.

The following is given as the method of making cheese pursued by Mr. McAllister, to whom the first premium was awarded. The committee say, the cheese was very firm and sound on the outside, but soft and rich within:

"We set our milk immediately after skimming at about 85 degrees, mix the rennet perfectly, let it stand 45 minutes, then break it up carefully and coarsely, let it stand 15 minutes, break it finer, let it stand and settle 15 minutes, and then dip off the whey, and then heat to 90 degrees; let it stand 30 minutes, dip off the whey again and then heat to 95 degrees; let it stand 30 minutes and then break the curd very fine, then heat to 100 degrees, let it stand 30 minutes and then dip the curd into the sink; salt soon while the curd is wet and warm—a tea-cup full of salt to 12 pounds of cheese—press very hard."

Hams.—The *Southern Cultivator* notices some hams exhibited at the Georgia state fair, which were one, two, three, and four years old. The writer says:—"The owner refused to divulge his secret; but as we have fortunately become possessed of it, we here give it. Procure some good, clean hickory ashes, have them perfectly dry; draw your meat from the pickle on a dry day; sprinkle the ashes over the meat pretty thick, being careful not to knock off more salt than what must fall off; then hang up your meat as high as possible; smoke it with cool smoke, made by hickory wood; be sure to take it down before the skipper-fly makes his appearance, being generally in this climate, first of March; pack it away on a dry day in casks: 1st, a layer of hams in perfectly dry hickory ashes; 2d, a course of corn cobs, &c.; cover your cask snug and tight, and you may rest easy about your hams."

Agricultural Song.

The following was sent to the officers of the Norfolk County (Mass.) Agricultural Society, at their meeting in October last, by **Tristram Burgess**, Esq., of Rhode Island:

With the Pioneer Axe, what a conquest is made;
  What a field from the forest is won!
What regions, reduced from the wilderness shade,
  Are now warmed in the beams of the sun.

From the rock where our fathers in exile first landed,
  Their clearing, from river to river, has spread;
And mountains, and plains, by their sons are commanded
  Till now on the beach of Pacific they tread.

What farm for a nation to cultivate now!
  And gather the wonderful harvest it yields;
'Tis an Empire, reduced to the Sickle and Plow,
  An empire of gardens, and orchards, and fields.

The Plow and the Sickle shall shine bright in glory,
  When the Sword and the Sceptre shall crumble in rust;
And the farmer shall live, both in song and in story,
  When warriors and kings are forgotten in dust.

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* The small kinds need not stand in the oven over one minute.

Notes for the Month.

Communications have been received since our last, from F. Holbrook, S. B. Halliday, Elisha Fuller, John W. Proctor, A. G. Moody, R. R., A Young Farmer, T., H. C. W., W. C. W., L. Durand, F. S. C., J. H. W., A. Redfield, J. R. S., N. Longworth, W. S., I. Hildreth, A Subscriber, S. Spencer, S. B. Buckley.

Books, Pamphlets, &c., have been received as follows—Catalogue of Fruit Trees, &c., at Hopewell Nursery, near Fredericksburgh, Va., from H. R. Robey, proprietor—The Autographical Counterfeit Detector, a Companion to the Bank Note Reporter, published by J. Thompson, 69 Wall-street. This contains fac-simile signatures of all the Presidents and Cashiers of Banks in the Union—price 25 cents. A copy of it is sent gratis to all subscribers to the Bank Note Reporter, which is the best work of the kind which has come under our notice.

☞ We have received a communication reviewing the address of Hon. J. A. King, published in our October number. The main points objected to are, that 10 per cent. income on the agricultural capital of Queens county, is too high, and that the calculations by which this amount is shown, are erroneous. For instance, it is contended, that Mr. K's "estimate of four shillings (50 cts.) per bushel for potatoes. and $12.50 per ton for hay, may do for last year, and for Queens county, in its particular location; but half that sum would have to apply to most years and most sections of the country. That deduction alone, would reduce the estimated net income of Queens county, nearly one half. In addition to that, the estimate that the value of the straw was one half that of the grain, must have been four fold too high, even for Queens county." It seems to us that the writer of the foregoing remarks loses sight of the fact that Mr. K's estimates were for Queens county alone, with no reference to other sections. His object was to show the income from capital invested in agriculture in a particular district, and hence the articles were estimated at their local value. The prices of potatoes, hay, and straw, are of course high, when compared with those obtained in districts remote from market; but for the neighborhood of New-York, we should not deem them over-rated.

☞ The paragraph in our last No., p. 341, attributing certain "stereotyped errors," to the American Agriculturist, was probably, so far as the source of the errors was alluded to, wrong. Most likely the writer saw them in some stray article, erroneously credited to that journal. He would not, we are certain, intentionally have misrepresented the matter.

Transmutation.—If our correspondent at Johnstown, N. Y., who signs himself "A Subscriber," will show us "heads of chess growing on wheat stems, with wheat blades," as he alleges he has seen, we will acknowledge that he has made out a case of transmutation. But it is this very statement that we utterly repudiate—disbelieve. We did not suppose that he meant to be understood in his former communication, (Oct. No., p. 318,) as asserting that chess actually grew on wheat stalks. If such *is* the case, the question is easily settled—only produce the wheat stalks with heads of chess growing on them, and all must admit the doctrine is proved conclusively. But so far as our knowledge extends, and we have been engaged in examining the matter for about 20 years, no such thing has ever been produced, nor do we suppose it ever will be. That our correspondent honestly believes that, in the case to which he alluded, such was the fact, we do not doubt; but it must be remembered that it occurred "many years since, when he was yet a boy." He then received an impression which has rested upon his mind till the present time; but we cannot take for "a fact as clear as our existence," the impressions of boyhood, especially when they contradict the well-known and established laws by which every grain, as we are assured by inspiration, is made to produce its like. "Do men gather grapes of thorns, or figs of thistles?"

National Board of Agriculture.—In another part of this number, will be found an article on this subject from the pen of our esteemed correspondent Hon. F. Holbrook, to which we invite particular attention. The establishment of such a Board, was contemplated by some of the founders of the General Government, and we are not aware that any serious objection has ever been made to the measure on constitutional grounds. We think there is every reason to believe that a Department of this character, properly conducted, would be the means of advancing agriculture in a great degree, and of indirectly benefitting all the interests of the country. In the statesman-like document to which we are happy to give publicity, the various arguments which bear on the subject are ably set forth.

Indian Corn and Meal.—Indian corn will always be an important product of this country. A large proportion of the most fertile lands in the Mississippi valley are much better adapted to the production of this grain than any other, and the quantity which that region is capable of producing, is incalculable. The main part of the crop will, probably, for many years, as now, be converted into beef and pork; but with the improvements which have been made in drying the grain—particularly by Stafford's steam apparatus—we think there is a fair prospect that it may become a permanent article of export. Experience has now demonstrated the practicability of delivering grain and meal prepared by this mode, in good order, in any port in the world; and as the crop is not grown in Britain, except to a very limited extent, nor in any part of Europe for extensive exportation, there is no reason why we may not supply the English markets with large quantities of the meal, when the people have found out its excellence as food for man and beast.

We have before us a statement of the comparative amounts of Indian corn, which arrived at different points of tide water during a part of the years 1848 and 1849. It appears that from the first of May to the 22d of August, this year, there arrived at Albany 3,643,708 bushels of corn, against 1,371,868 bushels of the previous year; that the exports from New-Orleans to August 11th, this year, were 1,455,306 sacks, being an increase 244,105 sacks over the same period last year. We shall endeavor to furnish an exhibit of the amount sent out of the country for the two last years.

Agriculture in New-Brunswick.—Mr. J. H. Reid, of Fredericton, N. B., writes—"Our show came off on the 4th October, and was the best ever held in the province. Our grains astonished the Old-Country people—wheat weighing 68 lbs. per bushel, barley 59 lbs., oats 45 lbs. Mr. Watts had a squash weighing 177 lbs. The horse show was not good; the good cattle were in few hands; my sheep were the only good stock of that kind; the pigs made a good show; and there was a good exhibition of manufactures. We are steadily advancing in the good cause. I got a resolution passed, ordering a copy of *The Cultivator* for every member of the Society. I am getting one ram and two ewes from Mr. Large, of Gloucestershire, England, the celebrated breeder of the Improved Cotswolds, or New Oxfordshires. The ram cost £60, and the ewes £10 each."

Broom Corn.—The Ohio Statesman says, that

Charles Eaton and Brothers have had 700 acres of land planted in broom corn the present season, 450 acres of which were rented at $5 an acre. Much of this land has been devoted to broom corn for five years in succession. The crop, after being cured, is sent chiefly to New-York.

Crops in North-Carolina.—Mr. S J. Wheeler, of Murfreesboro, writes—"Corn and pea crops are very good all through the eastern counties of our State; indeed I never saw heavier crops on the Roanoke, than I have seen during the past month."

The last Wheat Crop in Northwestern Ohio.—Mr. S. H. Arnold, of Seneca county, writes—"Wheat the present year is poor in quantity and quality; the injury being caused by the 'wheat midge' and rust. This county will not average half the usual yield. The fall-sown wheat looks well."

Starch from Indian Corn.—The Ohio Statesman informs us that large quantities of starch are made from this grain in that State. An establishment near Columbus is said to use 20,000 bushels of corn annually for this purpose. No attention is now paid to the color of the corn, as by the improved modes of manufacturing, as light-colored starch is produced from the dark-colored varieties, as from white. The quality of the starch here made is said to be superior, commanding a higher price in New-York and New-Orleans than that made from wheat. The offal of the grain is fed to hogs, and at the manufactory alluded to, 500 to 600 head are annually fattened.

Peat Charcoal.—Sometime since, we mentioned that extensive experiments were going on in England and Ireland, with peat charcoal as a deodorizer or disinfectant. By late accounts we learn that it has been successfully used for the purpose of rendering the contents of privies inodorous, and thus bringing them into a portable condition. It is thought that the substance will be brought into general use in large towns and cities, and that it will be of great utility, not only in an agricultural, but in a sanitory view. Mr. Rogers, who first brought the substance to notice for this purpose, gives some important results in regard to the application of peat charcoal in preventing the escape of odors from sewers, cess-pools, &c. He states that instead of removing the contents of such receptacles in warm weather, it is only necessary to cover the surface with two or three inches of the peat charcoal. Several experiments are cited where this had been done, and no odor arose for several months.

Potato Disease not caused by Insects.—Mr. Curtis, a distinguished English entomologist, has just published a volume in reference to insects which attack the potato. Speaking of the malady which has prevailed so extensively in potatoes for several years, he remarks—"Amongst the numerous causes which have been assigned for the appearance of this alarming and severe visitation, insects have been frequently taxed as the destructive agents; but I am convinced the calamity is not to be attributed to their presence." He admits that there are many species of insects which prey upon the potato in its various stages; but he thinks there is no evidence that their attacks are in any way connected with what is called the potato disease.

Cellars for Manure.—The claimants for the premiums on farms, offered by the Middlesex (Mass.) Agricultural Society, generally speak highly of the advantages of keeping manure in cellars. R. Chaffin states that he considers one load of manure composted in the cellar under his barn, worth three which have been exposed to the action of frost, rain, evaporation, &c. His cellar is closed, excluding the frost and rain altogether. His cows are kept in the barn, nights, all the year; their manure goes into the cellar, where hogs are kept to root over the different materials, and mix them into a compost.

Protection of Crops.—In many parts of the country, the grain-fields of the farmer suffer serious damage from the depredations of wild birds and animals. The common wild pigeon often does great injury by pulling up spring grain, especially Indian corn, near where their roosts or breeding places are established. They go in flocks, and destroy a field of many acres in a few minutes. Various means have been adopted to keep off the birds, such as placing images and other objects in the field, with but little advantage. It has been suggested that hawks might be trained in such a way as to prevent pigeons from lighting on grain-fields. In the days of falconry, several species of hawks were trained for the pursuit of game. We have one or more species in this country, which naturally prey on pigeons to a considerable extent. The pigeon-hawk, (*Falco columbarius*.) is an object of perfect terror to the pigeon. Whether it could be trained to answer the purpose suggested is doubtful; but from the great dread manifested towards it by the pigeon, it might be sufficient to confine the hawk in some conspicuous situation in the field.

Ohio Mineral Paint.—We have received a pamphlet giving an account of the discovery of this article, and describing its properties and mode of application. The history of its discovery is as follows:

About two years ago, near the town of Akron, Ohio, a singular substance was discovered at the bottom of a brook, resembling in its character and appearance, flakes of the purest indigo, and of the consistency of hard clay or cold tallow. This was at first regarded with but little interest, until some individuals, attracted by its singular qualities and appearance, were induced to make some experiments with it. Subsequent to this, however, it was also found to exist in greater quantities at some considerable depth from the surface of the earth, and on being taken from the mine and exposed to the atmosphere, it became completely indurated, resembling slate, or lumps of anthracite coal. This was finally ground, and mixed with linseed oil, and applied as a paint, and it gradually hardened until it changed to stone, perfectly protecting any substance it covered, from air, moisture and fire.

It is said to be susceptible of being made of various shades of color, from a cream and fawn to a blue, dark brown and black; that it readily mixes with the drying oils, and requires no particular skill in the mode of preparation, and is recommended as more economical than other paints. The composition of the original substance is given as follows:

Magnesia,	28	per cent.
Alumina,	26	" "
Silex,	15	" "
Oxide of Iron,	11	" "
Sulphate of Iron,	9	" "
Lime,	8	" "
Carbon,	3	" "
	100	

W. H. Starr, 67 Beekman-street, New-York, is agent for this paint.

Cultivation of Cranberries.—Sylvester Reeves, of Wayland, Mass., states to the officers of the Middlesex County Agricultural Society, that he has made an experiment in regard to the cultivation of cranberries. In 1841 he commenced setting out vines on a sandy loam, near a stream, which was liable to overflow its banks during freshets. The soil had been once plowed several years before, and the surface left very uneven, and so left to become swarded over. The cranberry vines were set out in sods of ten inches square, the sod of the ground to be planted having been previously removed, in corresponding squares—the distances being 18 to 24 inches. These vines grew thriftily, at first, but failed in dry weather.

He made another trial in 1845, by removing the soil to the depth of six to eighteen inches, reducing the surface to a more uniform level, placing the vines out in the sub-soil in the same manner, and of the same dimensions as in 1841. These vines covered the ground the third year, where the sub-soil was mellow and loose, without any farther labor; but where the soil was hard and mixed with small lumps of iron ore, their growth was more retarded.

In 1848, he selected the most productive part of the ground, raked and measured four bushels, from 4 square rods. The drouth of the past season, and a frost of the 16th of July, reduced the yield of the crop. The ground can be flowed winter and spring.

Answers to Correspondents.

Ringbone.—*A Young Farmer.* Youatt says—"Ringbone is one of the most serious lamenesses with which the horse can be afflicted. In its early stage, or when recognized only by a bony enlargement on both sides of the pastern-joint, or in some few cases on one side only, the lameness is not very considerable, and it is not impossible to remove the disease by active blistering or the application of the cautery; but there is so much wear and tear in this part of the animal, that the inflammation and the disposition to the formation of bone rapidly spread; and when the bony deposit begins to spread, the disease is incurable." We know nothing of ringbone being "fed by a bladder, situated in the heel, or posterior part of the foot."

Flax.—We know nothing, personally, of the success of flax on reclaimed bogs; but have been told that it does well in Ireland in such situations.

Insect in Wheat.—T., Hulmeville, Pa. The insect alluded to in the extract you send, is not described with sufficient accuracy to enable us to identify it. The color and size of the larva correspond to the larva of the wheat midge, *Cecidomyia tritici;* for a description of which see Cultivator for 1844, page 243, and current volume, page 256. Dr. Harris describes *two* grain moths—*Tinea granella*, and the Angumois moth, *Anacampsis cerealella.* A moth closely allied to the latter, if it is not in fact the same, called in some sections the "flying weevil," is described by Mr. Owen in the Cultivator for 1846, page 208 to 212, and 344. Your insect does not appear to be either of these; we think it more probable that it is the wheat midge, above mentioned, which is erroneously called "weevil" in the northern States. The larva, however, does not eat into the grain. It is a simple maggot and does injury only while the grain is in a soft or immature state, by absorbing the juices.

Muck and Clay.—A. R., Delhi, N. Y. From the description of your soils, it is impossible to give minute directions in regard to the application of muck and clay. As a general rule, the clay will do most good on the most gravelly or sandy soils, and the muck on those which have least vegetable matter. The muck is better when composted with animal manure—ashes are better than lime to mix with it. If it is to be used alone, next spring, it is better to be drawn out this fall, and left in small heaps, that the frost and air may dispel the acids. (See Cult. for 1847, pages 297, 298.

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